



City of Boston.

DEPARTMENT OF PARKS.

TWELFTH ANNUAL REPORT

OF THE

**OFFICE OF
CITY ENGINEER,
BOSTON.**

BOARD OF COMMISSIONERS

FOR THE

YEAR 1886.



PRINTED FOR THE DEPARTMENT.

1887.

DEPARTMENT OF PARKS.

REPORT.

To the Honorable the City Council of the City of Boston:—

Section 15 of the Act of 1875, Chapter 185, entitled "An Act for the laying out of Public Parks in or near the City of Boston," requires that the Board of Park Commissioners "shall annually, in the month of January, make to the City Council of Boston a full report of its doings for the preceding year, including a detailed statement of all their receipts and expenditures."

In accordance therewith the Board has the honor to submit the following report:—

FINANCIAL STATEMENTS.

I.

*Receipts and Expenditures of the Department for the Year
1886.*

BACK BAY.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1885	\$6,639 57
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No payments have been made on this account during 1886.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885	\$517 05
Amount transferred from Income Account : . .	6,042 91
	\$6,559 96

EXPENDITURES FOR CONSTRUCTION.

Excavating, Grading, Loam, and General Work.

Superintendence and general work	\$2,125 34
Dredging, labor, and materials	488 07
Grading, labor, and materials	156 22
Engineering expenses	21 45
	—————
	\$2,791 08

Plans and Designs.

F. L. Olmsted, Landscape Architect	750 00
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Plantations.

Labor and expenses	260 24
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Sidewalks, Gutters, and Drainage.

Paving-blocks	\$102 70
Setting curb-stones and paving gutters	4 44
Curb-stones	2 80
	—————
	109 94

Agassiz Bridge.

Expenses of construction, labor, and materials	55 20
	—————
	\$3,966 46

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Watchmen, labor, and expenses	\$2,337 00
Paid Police Department	234 00
Signs and notices	22 50
	—————
	2,593 50
	—————
	\$6,559 96
	—————

RIVERDALE.

[*Muddy River Improvement.*]

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1885	\$105,648 88
	—————

Expenditures.

Amount paid for land in 1886	\$1,500 00
Balance unexpended, Dec. 31, 1886	104,148 88
	—————
	\$105,648 88
	—————

ARNOLD ARBORETUM.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1885	\$20,598 15
Public Park Loan, issued April 29, 1886	4,000 00
" " " June 15, 1886	16,000 00
	_____ \$50,598 15

Expenditures.

Amount paid for land in 1886	\$50,530 86
Balance unexpended, Dec. 31, 1886	67 29
	_____ \$50,598 15

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885	\$426 31
Amount transferred from Income Account	1,903 96
	_____ \$2,330 27

EXPENDITURES FOR CONSTRUCTION.*Driveways.*

Expenses of construction	\$221 66
Fuel, supplies, carting, etc.	13 95
Engineering expenses	166 16
	_____ \$401 77

EXPENDITURES FOR MAINTENANCE.*Park Police.*

Pay of men	\$1,066 18
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Care of Grounds and Buildings.

Watchmen, labor, and expenses	837 78
	_____ 1,903 96
Balance unexpended, Dec. 31, 1886	24 54
	_____ \$2,330 27

FRANKLIN PARK.**LAND ACCOUNT.**

Balance unexpended, Dec. 31, 1885	\$251,663 26
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Expenditures.

Amount paid for land in 1886	\$142,318 42
Balance unexpended, Dec. 31, 1886	109,344 84
	_____ \$251,663 26

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885	\$109 80
Amount transferred from Income Account	8,108 81
	—————
	\$8,218 61

EXPENDITURES FOR CONSTRUCTION.*Terrace Wall.*

Labor and expenses	\$65 00
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General Work.

Superintendence and general work	\$229 83
Engineering expenses	2 94
Coach-hire	46 00
	—————
	278 77

Plans and Designs.

Heliotyping and printing plans for report and general delivery	\$1,034 60
Landscape Architect and expenses	761 75
	—————
	1,796 35
	—————
	\$2,140 12

EXPENDITURES FOR MAINTENANCE.*Park Police.*

Pay of men	\$4,007 74
Equipments and supplies	107 64
	—————
	\$4,115 38

Care of Grounds and Buildings.

Labor in care of grounds and buildings	\$1,324 51
Expenses in care of grounds and buildings	629 80
	—————
	1,954 31
	—————
	6,069 69

EXPENDITURES FOR BETTERMENTS.*Betterment Expenses.*

Advertising	8 00
Balance unexpended, Dec. 31, 1886	80
	—————
	\$8,218 61

CHARLES RIVER EMBANKMENT.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1885	\$237 20
Public Park Loan, issued Nov. 1, 1886	55,000 00
	—————
	\$55,237 20

Expenditures.

Amount paid for land in 1886	\$55,123 65
Balance unexpended, Dec. 31, 1886	113 55
	—————
	\$55,237 20

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885	\$68,823 71
Amount transferred from Income Account	1,963 94
	—————
	\$70,787 65

EXPENDITURES FOR CONSTRUCTION.*Sea-wall and Filling.*

Amount paid under contract with	
Parker & Sylvester	\$62,858 16
Surveyors and Assistants	4,316 50
Labor	1,379 48
Engineering expenses and incidentals	232 13
Coach-hire	6 00
	—————
	\$68,792 27

EXPENDITURES FOR MAINTENANCE.*Care of Grounds and Buildings.*

Repairs and care of buildings	1,963 94
Balance unexpended, Dec. 31, 1886	31 44
	—————
	\$70,787 65

MARINE PARK.**LAND ACCOUNT.**

Balance unexpended, Dec. 31, 1885	\$27 43
	—————

Transferred to Incidental Expenses, City Account, April 19, 1886, by order of the City Council.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885	\$17,793 26
Amount transferred from Income Account	1,959 81
	—————
	\$19,753 07

EXPENDITURES FOR CONSTRUCTION.

Structures.

Amount paid under contract with Benj.

Young for temporary pier . . . \$11,633 44

Amount paid under contract with O'Con-

nor & Co., for wooden shelter . . . 2,600 00

Refectory building and plank-walk . . . 1,242 22

Gas-lights, labor, and supplies . . . 1,003 13

Inspection and Engineering expenses . . . 530 69

_____ \$17,009 48*General Work.*

Superintendence and general work . . . \$201 06

Coach-hire 5 00

_____ 206 06

_____ \$17,215 54

EXPENDITURES FOR BETTERMENTS.

Betterment Expenses.

Advertising 8 00

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Watchmen and labor on grounds . . . \$1,751 93

Expenses in care of grounds . . . 207 88

_____ 1,959 81

Balance unexpended, Dec. 31, 1886 569 72

_____ \$19,753 07

WOOD ISLAND PARK.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1885 \$865 55

EXPENDITURES FOR CONSTRUCTION.

Grading, Loam, and General Work.

Grading, labor \$580 57

General work 196 18

Engineering expenses 55 47

_____ \$832 22

Balance unexpended, Dec. 31, 1886 33 33

_____ \$865 55

DEPARTMENT APPROPRIATION.

Balance unexpended, Dec. 31, 1885	. . . . .	\$998 85
Appropriation for the financial year 1886-87	. . . . .	6,500 00
Amount transferred from Income Account	. . . . .	1,626 27
		<u><u>\$9,125 12</u></u>

GENERAL ACCOUNT.

Expenditures.

Salary of secretary and clerk	. . . . .	\$3,000 00
Clerical services at office, Registry of Deeds and Assessors' office	. . . . .	1,492 50
Printing annual report and special re- port on Franklin Park	. . . . .	1,371 48
Telephone and messenger service and incidentals	. . . . .	341 98
Office furniture and fitting up office	. . . . .	221 80
Seeking expert evidence in land-dam- age cases	. . . . .	150 00
Stationery	. . . . .	118 20
Expenses of Legislative Committee's visit to the parks	. . . . .	70 00
Coach-hire	. . . . .	10 00
	<u><u>—</u></u>	<u><u>\$6,775 96</u></u>
Balance unexpended, Dec. 31, 1886	. . . . .	2,349 16
	<u><u>—</u></u>	<u><u>\$9,125 12</u></u>

PARK NURSERY.

Balance unexpended, Dec. 31, 1885	. . . . .	\$1,168 07
Appropriation for the financial year 1886-87	. . . . .	5,000 00
Amount transferred from Income Account	. . . . .	174 58
	<u><u>—</u></u>	<u><u>\$6,342 65</u></u>

Expenditures.

Labor	. . . . .	\$2,828 07
Assistant Landscape Gardener	. . . . .	2,199 96
Expenses in care of propagating house and nursery,		389 51
Balance unexpended, Dec. 31, 1886	. . . . .	925 11
	<u><u>—</u></u>	<u><u>\$6,342 65</u></u>

INCOME.

Receipts.

Balance remaining, Dec. 31, 1885	. . . . .	\$6,820 69
Received from rents and sale of buildings, grass, stone, and old materials	. . . . .	16,938 65
Received from premiums on loans	. . . . .	190 00
	<u><u>—</u></u>	<u><u>\$23,949 34</u></u>

Payments.

Transferred to Franklin Park	\$8,108 81
Transferred to Back Bay	6,042 91
Transferred to Charles River Embankment	1,963 94
Transferred to Marine Park	1,959 81
Transferred to Arnold Arboretum	1,903 96
Transferred to Park Department	1,626 27
Paid into Public Park Sinking Fund	1,227 72
Transferred to Park Nursery	174 58
Balance remaining, Dec. 31, 1886	941 34
	<hr/> \$23,949 34 <hr/>

II.

Summary of Receipts and Expenditures on account of Back Bay Construction from July 23, 1877, to Dec. 31, 1886.

BACK BAY CONSTRUCTION.

Receipts.

From appropriations for Back Bay	\$1,082,179 39
From appropriations for Park Department	22,868 85
From Income Account	3,449 41
	<hr/> \$1,108,497 65 <hr/>

Expenditures.

Filling	\$453,577 23
Excavating, grading, loam, and general work	277,615 48
Retaining walls, curb and fence	107,284 71
Boylston bridge	92,011 43
Beacon Entrance bridge	55,928 79
Railroad bridge	39,995 04
Plantations	19,991 52
Plans and designs	19,150 25
Office and general expenses	14,114 92
Sidewalks, gutters, and drainage	13,917 57
Machinery, tools, etc.	8,810 91
Surveying	5,472 16
Agassiz bridge	627 64
	<hr/> \$1,108,497 65 <hr/>

III.

Receipts and Disbursements of the Department from the Organization of the Board, Oct. 8, 1875, to Dec. 31, 1886.

PUBLIC PARK CONSTRUCTION AND MAINTENANCE.

Receipts.

Public Park Loan	\$2,484,000 00
Appropriations, less transfers, merged balances,	
and betterment expenses	1,513,118 62
Income appropriated to maintenance	44,569 09
	<hr/>
	\$4,041,687 71

Disbursements.

Back Bay construction	\$1,108,497 65
Franklin Park land	990,655 16
Back Bay land	459,360 43
Charles River Embankment land	370,886 45
Marine Park land	232,972 57
Charles River Embankment construction	176,968 56
Riverdale land	95,851 12
Arnold Arboretum land	79,932 71
Arnold Arboretum construction	58,975 46
Wood Island Park land	50,000 00
Marine Park construction	40,838 54
Franklin Park construction	33,747 34
Wood Island Park construction	33,517 34
General account	32,059 85
Franklin Park maintenance	20,104 29
Park nursery	12,160 56
Charles River Embankment maintenance	5,321 41
Arnold Arboretum maintenance	4,985 81
Riverdale construction	4,000 00
Marine Park maintenance	3,020 06
Back Bay maintenance	2,593 50
Wood Island Park maintenance	49 33
Balance unexpended, Dec. 31, 1886	225,189 57
	<hr/>
	\$4,041,687 71

PUBLIC PARK DEBT AND SINKING FUND.

Receipts.

Appropriations for interest on debt	\$405,729 33
Received from betterments, less refunded	293,925 60
Appropriations for Sinking Fund	278,003 00
Interest on bank deposits and investments	100,187 97
Income applied to the payment of debt	94,000 00
From Park appropriations for Betterment Expenses	9,677 62
Income paid into Sinking Fund	3,355 38
	<hr/>
	\$1,184,878 90

Disbursements.

Public Park Sinking Fund	\$663,684 14
Interest on Public Park debt	405,729 32
Debt cancelled by revenue and betterments	99,000 00
Betterment expenses	9,677 62
Betterments held under protest	6,787 81
	<hr/>
	\$1,184,878 90

DEBT STATEMENT.

The Public Park Debt, Dec. 31, 1886, to be paid as it becomes due from the Resources of the Public Park Sinking Fund.

Back Bay, 4½% Loan, due Oct. 1, 1887	\$450,000 00
West Roxbury Park, 4% Loan, due Jan. 1, 1913 . .	233,000 00
Arnold Arboretum, 4% Loan, due Jan. 1, 1913 . .	60,000 00
East Boston Park, 4% Loan, due Jan. 1, 1913 . .	50,000 00
West Roxbury Park, 4% Loan, due April 1, 1913, . .	300,000 00
Charles River Embankment, 4% Loan, due April 1, 1913	285,000 00
City Point Park, 4% Loan, due April 1, 1913 . . .	209,000 00
Muddy River Improvement, 4% Loan, due April 1, 1913	119,000 00
West Roxbury Park, 4% Loan, due Jan. 1, 1914, . .	500,000 00
Muddy River Improvement, 4% Loan, due April 1, 1914	75,000 00
<i>Amount carried forward</i>	<hr/> <i>\$2,281,000 00</i>

<i>Amount brought forward</i>	.. .	\$2,281,000 00
Charles River Embankment, $3\frac{1}{4}\%$ Loan, due Oct.		
1, 1915	.. .	16,000 00
City Point Park, $3\frac{1}{4}\%$ Loan, due Oct. 1, 1915,	.. .	13,000 00
Arnold Arboretum, $3\frac{1}{2}\%$ Loan, due April 1, 1916	.. .	20,000 00
Charles River Embankment, $3\frac{1}{2}\%$ Loan, due Oct.		
1, 1916	.. .	55,000 00
 Total Debt	.. .	\$2,385,000 00
Less the means in the Sinking Fund, and in hands of City Treasurer, for paying the same, Dec. 31, 1886	.. .	670,471 95
 Debt, less means for paying	.. .	<u>\$1,714,528 05</u>

SINKING FUND STATEMENT.

*Resources of the Public Park Sinking Fund, Dec. 31,
1886, in hands of Sinking Fund Commissioners; being
Bonds of the City of Boston and Cash, with the Dates
when the Bonds become due.*

West Roxbury Park, 4% Loan, due Jan. 1, 1913	.. .	\$100,000 00
Back Bay, $4\frac{1}{2}\%$ Loan, due Oct. 1, 1887	.. .	75,000 00
Arnold Arboretum, 4% Loan, due Jan. 1, 1913	.. .	60,000 00
East Boston Park, 4% Loan, due Jan. 1, 1913	.. .	50,000 00
Albany Street, 6% Loan, due March 1, 1887	.. .	30,000 00
Muddy River Improvement, 4% Loan, due April 1, 1913	.. .	19,000 00
 Total investments	.. .	\$334,000 00
Cash	.. .	329,684 14
 Total resources	.. .	<u>\$663,684 14</u>

PARK CONSTRUCTION.

In its last annual report the Board called attention to the low limit of taxation fixed by statute, and the consequent necessary contraction of appropriations for all purposes, to-

gether with the manifest impossibility of completing the public parks, or of carrying on the work with any degree of completeness or continuity with the small amounts that could be afforded from this source, and recommended that application be made to the Legislature for the passage of an act to enable the city to issue fifty-year bonds for park construction, provided for by annual payments to sinking funds sufficient to meet the same at maturity, thereby spreading the cost of these permanent improvements over a long term, and allowing the present generation to share in the benefit of their completion at a proportional cost relatively lower than if built at once by taxation.

This recommendation resulted in the passage of an act, approved June 21, 1886, authorizing the city to issue bonds, payable in not exceeding fifty years, to the amount of five hundred thousand dollars each year, and to a total amount not exceeding two million five hundred thousand dollars, for the construction of the public parks, said loan to be outside the limit of municipal indebtedness fixed by section two of chapter one hundred and seventy-eight of the Acts of the year 1885.

Differences of opinion in the Board of Aldermen regarding the act resulted in the postponement of concurrent city action until the opening of the City Government the present year, when the necessary vote was passed to authorize the Treasurer to issue the bonds provided for in the act, and to enable this department to proceed with the construction of the parks. Owing to the straitness of the city finances under the taxation law, and to the expected relief by a loan for park construction, the City Council declined to make appropriations for the public parks; consequently the only constructive work done was from balances of former appropriations, the details of which will be found in the report of the City Engineer, under whose direction the work has heretofore been done.



CHARLES RIVER EMBANKMENT.

In regard to the work to be done upon the various parks the coming year the Board will follow the plan laid down in its recommendations to the City Council contained in its last annual report.

CHARLES RIVER EMBANKMENT.

The Board made applications to the Legislature for an extension of the time within which the Charles River Embankment must be completed, and for a change of line at the southerly end to provide for future extensions. These propositions were favorably entertained by the Board of Harbor and Land Commissioners, and resulted in chapters sixty-five and one hundred and thirty-four of the Acts of 1886.

The contract for the construction of the embankment seawall was amended to conform to the new line, and the work proceeded without further interruption until the completion of the contract in October. Filling has since been going on by carts from the site of the new Court-House and various other sources without cost to the city.

A preliminary study of a plan for laying out these grounds is herewith presented, with the following explanation of the plan by the Landscape Architect: —

To the Park Commissioners: —

SIRS, — The preliminary plan which I have had the honor to submit for your consideration for the improvement of the lately embanked ground on Charles river, between Cambridge and Leverett streets, derives its special character from regard for the following circumstances: —

1. It is near a part of the city much occupied by extensive industrial establishments, and having a large tenement-house population.

2. It should be an important means of reducing the death-rate at midsummer of infants and young children.

3. To all others it is likely to be most useful at nightfall, when the finer beauty of gardens is lost, people coming to it then in great numbers who have been confined during the day in close and heated buildings, streets, and yards.

4. Its special sanitary value, both with respect to children and to the class of visitors last mentioned, will be in the broad expanse of tide-water upon which it opens ; partly because of the radical change of scene which it will offer from that of the compact town, and partly because of the radical change of air that it may provide.

5. It should offer some facilities for open-air exercises for people whose occupations are sedentary.

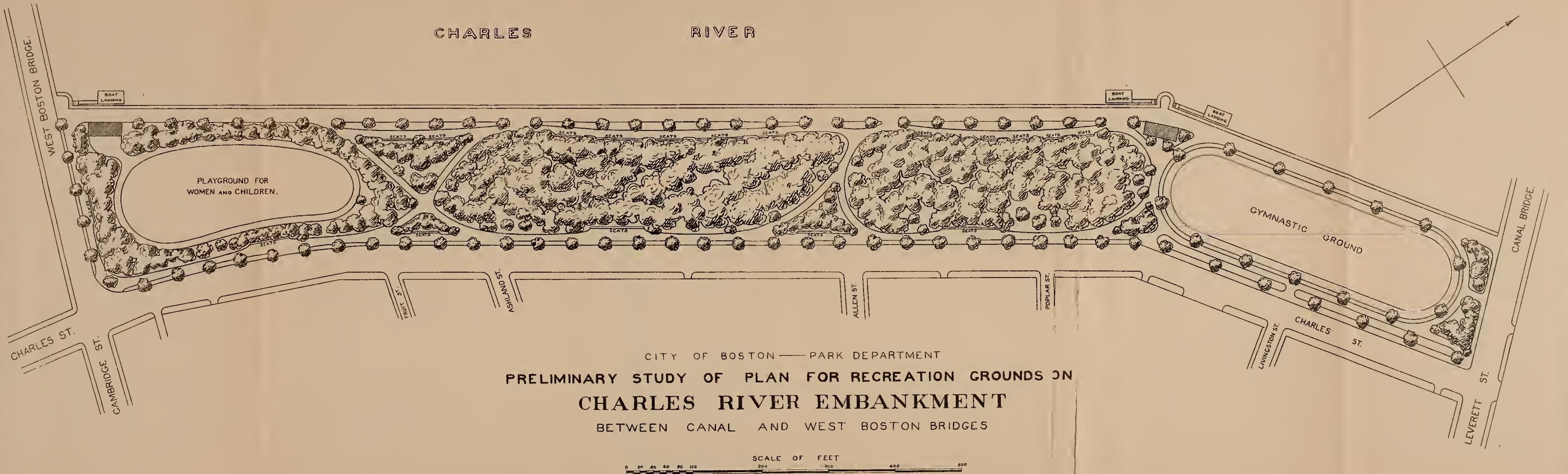
6. The site is one of extreme exposure for plants. Fine garden qualities could only be maintained at a greater cost than in the other public grounds of the city. It is well adapted to the growth of hardy trees.

7. The space is too small relatively to the number of people likely to resort to it for the introduction of plots of turf to be walked upon. It would be impossible to keep them in decent condition.

Governed by these considerations, the leading features of the plan are :—

First. A level promenade nearly half a mile in length, adjoining and overlooking deep water. This promenade is to have an unbroken width of twenty-five feet. It is to be bordered on the side opposite the river by a row of trees, back of which are to be shaded seats, the arrangements being spacious, simple, and convenient for keeping clean and in good order.

Second. On the side of the promenade toward the city





the larger part of the ground is to be raised above the general level with slopes of a natural aspect, and is to be planted in the character of a natural grove, screening the air coming from that direction, shutting the buildings out of view, giving a certain degree of sylvan seclusion to the promenade, and smothering the roar of the streets to those upon it.

Third. A space 370 by 150 feet in extent is to be enclosed and prepared especially as an exercise-ground for women and children, no others being admitted. It is to be screened about with shrubbery, and is to be adapted only to simple forms of recreation in which many can be engaged at a time quietly, without compelling care-taking of excessive cost.

Fourth. A space 500 by 150 feet in extent is to be fitted with simple gymnastic apparatus, and subject to use for more robust forms of exercise; but not games or feats likely to attract crowds in which it would be difficult to maintain order, and which would interfere with the comfort of women and children on the promenade.

Fifth. Two landings for boats are provided for, and it is intended that boats for hire should be offered at them.

Sixth. Two houses to contain water-closets, tool-rooms, and offices of administration are proposed, one at the entrance of the women's exercise-ground and near the southern boat-landing, the other near the gymnastic-ground and the northern landing.

Seventh. A row of lights at the edge of the embankment, and another along the street, will satisfactorily light the entire ground. No gas-pipes are to be laid in the planted parts.

Respectfully,

FREDK. LAW OLMS TED,

Landscape Architect.

Since the earliest report of the Board it has always been its opinion that the improvement of the Charles River Basin is a matter of such importance to the future City of Boston that no effort should be spared to secure its final consummation. It may not be wise, in the present condition of the city finances, to carry the work of actual construction farther at present; but the city should urge upon the Legislature the importance of devoting the shores of the basin to ornamental purposes in such a manner as to forever preclude the possibility of its use for other purposes. State, private, and corporate interests have alike had designs upon its area. In 1870 a proposition was made by a committee of the House of Representatives to fill a large area of the basin for building purposes, thereby reducing the river to a narrow channel 600 feet wide. In 1881 private interests secured from the Legislature the right to fill a large area of flats on the Cambridge side, carrying the harbor line several hundred feet farther into the river. Recently a railroad corporation published a plan to utilize the Boston side for railroad purposes. This proposition, or any measure which proposes to reduce the river to a narrow channel, would destroy its beauty and the salubrious effect that its proper development would have upon the city; and no legislation could be more beneficial than the passage of an act to forever guard against this result.

MARINE PARK.

The temporary pier at the Marine Park was completed during the early summer, and has received a hearty appreciation from the people visiting the "Point." It was thronged day and evening in the hot months by those seeking its fresh and invigorating breezes. It provides for a want which will be more fully met when the contemplated iron pier running some twelve hundred feet farther into the bay, is constructed. Q and First streets are now being constructed so as to con-

nect with each other,— a thing long desired by the public. The Paving Department will also, by means of the same appropriation, construct Q street on a permanent and satisfactory grade.

There will then be a pleasant drive by Q street across the shore end of the Marine Park from Sixth street to First street. The grading of Q street will also enable this department to grade and plant that portion of the Marine Park immediately adjoining the street.

Before much more can be done on the pleasure-bay, legislation must be had extending the provisional line of improvement defined by Chapter 360 of the Acts of the year 1885. In reporting this bill the Committee on Harbors and Public Lands stated that—

"It is not intended in this bill to define the exact limits within which the whole of the contemplated Marine Park at South Boston may be located. The plan of the Park Commissioners proposes the extension of a portion of the park beyond the north line of the area described in the bill. The limits and conditions of such extension involve important questions in connection with the great work of harbor conservation and improvement which the Commonwealth is now prosecuting in the enclosure and filling of the South Boston Flats, and the construction of docks and piers between Fort Point Channel and Castle Island. More time is desired for careful study and consideration by the Harbor and Land Commissioners and the Park Commissioners of the interests involved and the respective plans to be adopted in the further reclamation of the flats by the Commonwealth, and in the location and construction of the proposed park by the city. This will not delay the beginning of their work by the Park Commissioners within the limits defined in the bill."

The Harbor and Land Commissioners state that their plans are not so far developed as to enable them to determine how large an area of flats, north of its present location, they can recommend adding to the Marine Park. After consultation with them it has been determined to make such an application to the Legislature as will enable legislation to be had if it is hereafter found expedient.

The preliminary plan of the Marine Park, published in the report for 1883, is herewith reprinted, the outlines of Castle Island and appurtenant flats being added for convenient reference. Negotiations will also be had with the United States for authority to use Castle Island and its flats in harmony with this design.

FRANKLIN PARK.

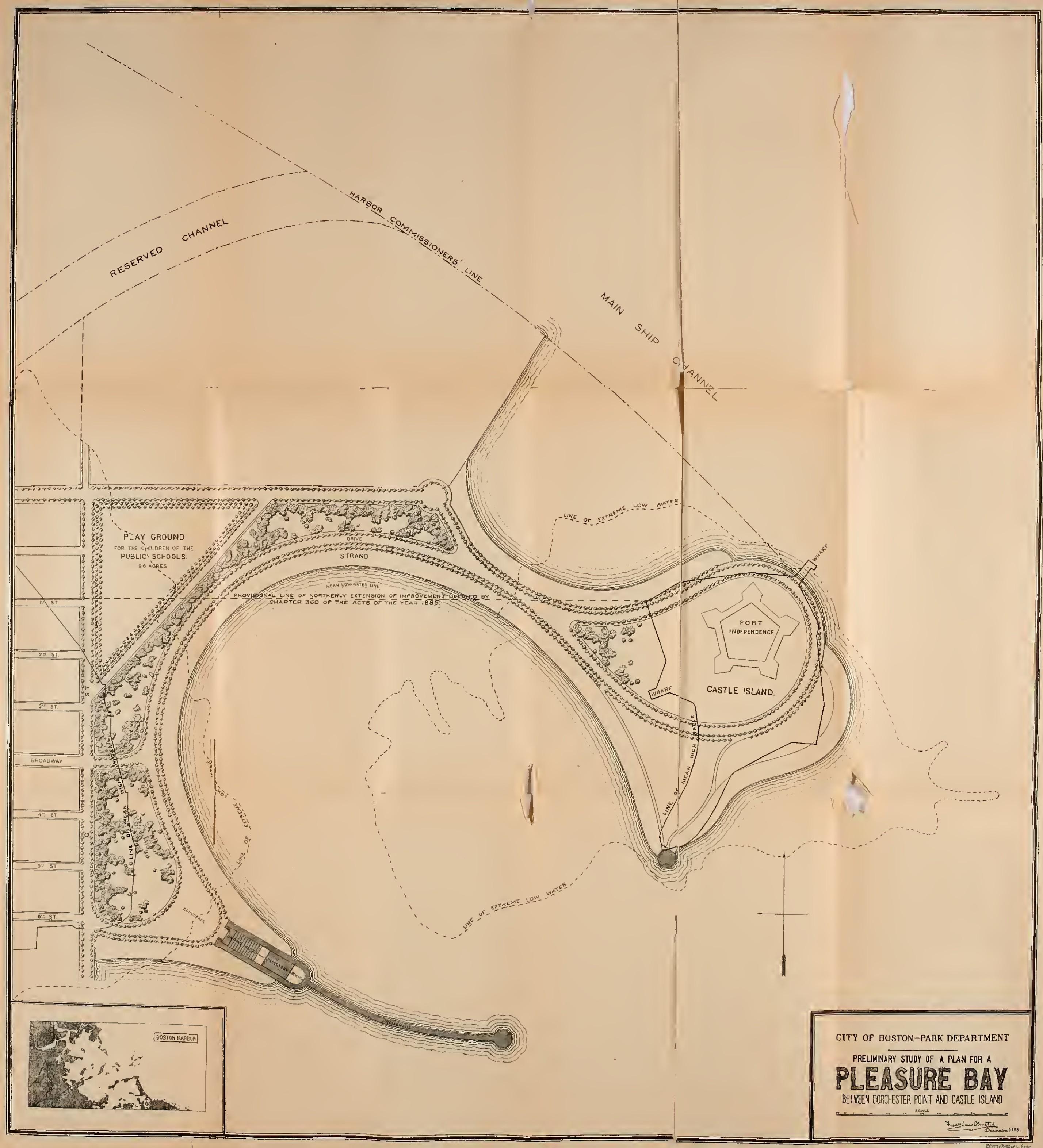
The plan for laying out Franklin Park designed by Mr. Olmsted, and published last year in a special report which was prepared by him, has met the requirements of the public taste so far as the popular opinion has been noted, no adverse criticisms having appeared.

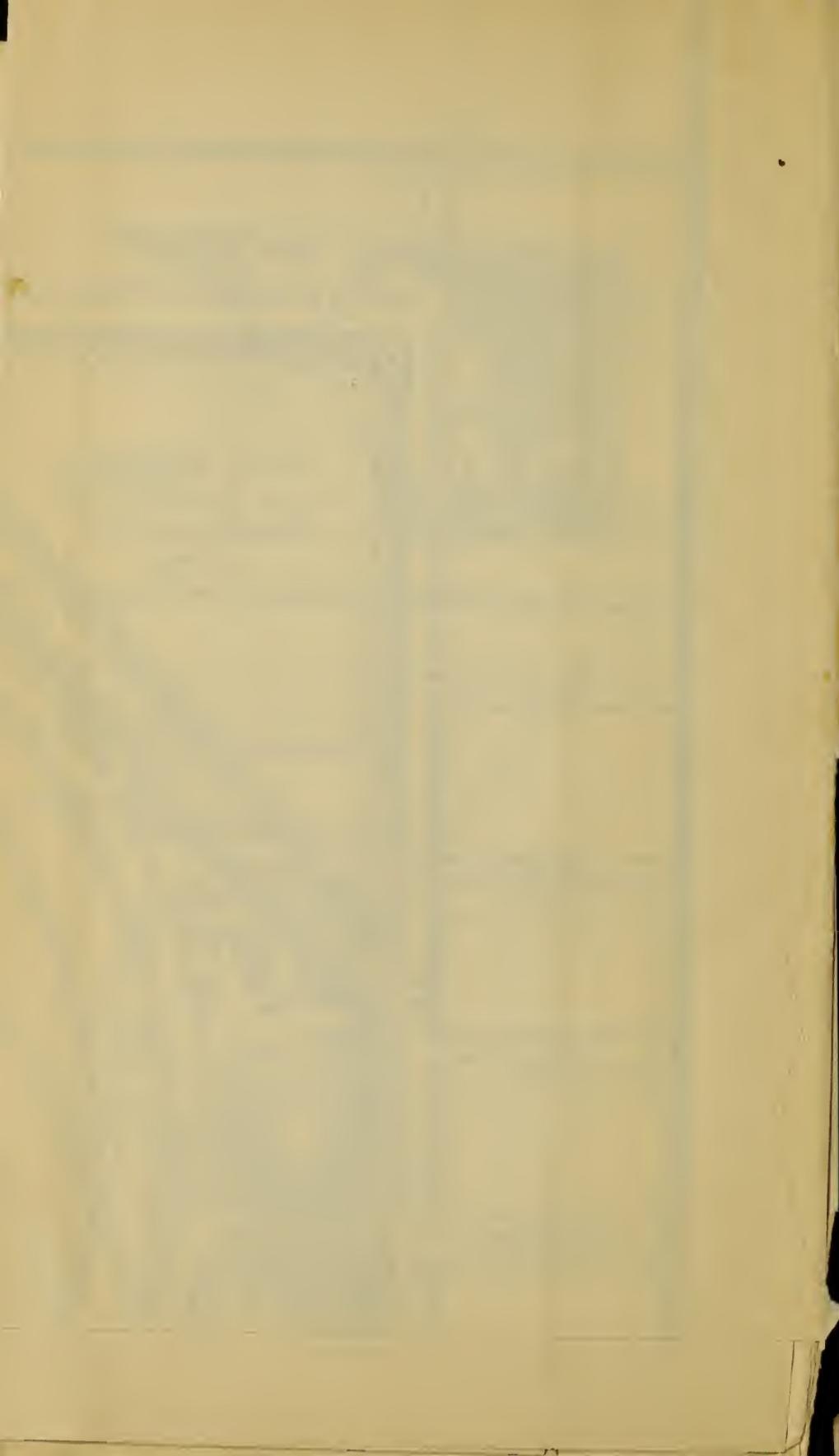
The Park Nursery and propagating-house, under the efficient care of the Assistant Landscape Gardener, Mr. W. L. Fischer, aided by a half-dozen hands, have, during the year, largely increased the number and value of plants of all kinds required for the parks.

ARNOLD ARBORETUM.

Professor C. S. Sargent, director of the Arnold Arboretum, has presented this Board with his report to the President and fellows of Harvard College for 1885-86 in which he says:—

"I have the honor to submit the following report of the condition and progress of the Arnold Arboretum during the year ending August 31, 1886:—





"A beginning has at last been made in planting the type collection of trees on the system of arrangement briefly described in my last annual report. The ashes, elms, catalpas, birches, hickories, hophornbeams, and beeches, or a large part of the individuals and groups intended to illustrate these genera, have been planted. In the *coniferae*, the true pines, the firs, spruces, and larches have been planted. The ground has been prepared to receive, in the spring of 1887, the oaks, walnuts, and chestnuts. When these are planted, the most important genera of timber-trees, those in which individuals require the longest period to attain maturity, will have been arranged. Planting, in addition to that already provided for, cannot, however, be undertaken until the City of Boston finishes, or at least extends, the roads through the Arboretum. Practically nothing has been accomplished by the city authorities during the year, and no work whatever has been done by them in the Arboretum since December. The planting is now already far in advance of the road-making.

"About seventy thousand trees and shrubs have been permanently planted during the year in the systematic arrangement of trees, in boundary belts, and in different border and coppice plantations. The ground which will be occupied by the trees of the permanent type collection has been prepared in the most thorough and careful manner. The contract executed between the President and Fellows of Harvard College and the City of Boston provides that the Arboretum shall be maintained in this place for a thousand years, and there is good reason to hope, therefore, that many of the trees now planted will be allowed to live out the full term of their existence. Trees have never been planted with better promise of undisturbed old age. It is proper, therefore, that all possible provision for their future requirements should be made. None of the trees in the type groups have been planted in

pits less than ten feet square, and all trees intended to grow singly and develop into specimens are planted in pits twenty-five feet square. Rock, gravel, and sandy soil have been removed from all pits to a uniform depth of three feet and replaced by a compost of loam and peat. The soil, as far as practicable, has been deepened and enriched over the whole surface planted. Nearly a thousand squares of loam have been brought into the Arboretum during the year for this purpose. The result of this expenditure, which is very considerable, will not perhaps be apparent for many years; but sooner or later the Arboretum will get the full benefit of it in older and finer trees than could have been raised on its naturally thin and now exhausted soil.

"A dwelling-house, with an acre of ground adjoining the Centre-street entrance, has been taken on a long lease from the trustees of the Adams Nervine Asylum. A small propagating-house, better adapted to the reduced requirements of the Arboretum than the larger houses of the Bussey Institution which have been occupied for this purpose during several years, has been built at this point. The rest of the leased land will be used as a frame-yard and nursery; the dwelling-house will be occupied by the superintendent of the Arboretum.

"The nurseries, plantations, and natural woods are in a healthy and generally satisfactory condition. Young trees have grown well, and the old trees in the woods and scattered about the grounds, which have been pruned from time to time, now show the good results which follow this method of treatment.

"The interchange of plants and seeds with other botanical and horticultural establishments has been continued during the year. There have been 2,606 plants and 106 packets of seeds distributed as follows: To all parts of the United States, 2,164 plants and 7 packets of seeds; to Canada, 67

packets of seeds ; to Great Britain, 376 plants and 15 packets of seeds ; to the continent of Europe, 17 packets of seeds ; to the Island of St. Helena, 66 plants.

"There have been received during the year, 1,773 plants and 156 packets of seeds from 22 donors. Mr. Dawson has collected during the year nearly 62,000 shrubs from the woods in different parts of New England. These have been permanently planted in the borders along the completed driveway or have been added to the nurseries.

"There have been added to the Herbarium during the year 955 sheets of dried plants. Specimens in the Museum have been rearranged and relabelled, and many duplicate and superfluous specimens distributed.

"I was able, through the courtesy of the Secretary of the United States Light-House Board, to spend the month of April, in company with Mr. Faxon, on the light-house tender " Laurel " in visiting the shores and islands of southern Florida for the purpose of studying the peculiar vegetation of that region. A large amount of interesting material was gathered during this journey, which extended also to western Louisiana, Alabama, and the Florida peninsula."

COLUMBIA STREET.

The Board desires again to call attention to the importance of widening Columbia street, the connecting link between the Marine Park and the other parks of the system.

LAND SETTLEMENTS.

Of the twenty unsettled claims for land damages remaining at the beginning of the year 1886, fourteen have been settled or tried, three of which, however, have been carried up on exceptions, and six others are awaiting their turn for trial.

ADDITIONAL PARK LANDS.

It is the desire of the Board to keep constantly before the City Government and the people its plans for the present and future. More money is wanted to carry out these plans, but not more than has been necessary from the beginning, and not for any other purposes than those originally contemplated. The plans remain the same. In its report of last year the Board says : —

"The system of parks as planned and partially carried out by the preceding Boards requires sundry additional lands for the securing of which no provision has yet been made. The most important of these locations is the proposed Jamaica Park, approached on one side by the Riverdale Road. It is the connecting link between the Back Bay and Riverdale Improvements and the Bussey Park (Arnold Arboretum), and will make a pleasure-ground of great beauty and attraction in the chain of parks. It has been referred to and recommended by the Board several times in past years, and this Board can only repeat its recommendation, that a loan of \$350,000 be authorized, to be issued only as fast as needed, to purchase the estates now in the market, and to secure others from time to time as arrangements therefor can be made."

The second report of the Board, in 1876, advocated this location in the following language : —

"The area of Jamaica Park, including the pond of seventy acres, is one hundred and twenty-two acres. This beautiful lake is the only important sheet of fresh water within the city limits. For a short distance on its northerly and southerly

side it is skirted by the highway, and from these points of view its beauty is familiar to the public. Its western shore is a somewhat steep hillside, well planted with trees and shrubbery, and mostly occupied at present by private dwellings, with their adjacent ornamental grounds, seriously disfigured, however, within a few years, by the erection of extensive ice-houses. Its eastern border is less bold, more irregular in outline, and at present occupied by private dwellings, with their lawns and shrubberies, and with some fine trees. The different characters of the opposite shores contrast well with each other. Unless the city takes possession of the entire shore the rural character of the scenery will probably be hopelessly destroyed within a few years. As estates come into the market, one after the other, the banks will be denuded of their present fine growth, and be replaced by unsightly ice-houses, with their adjuncts of stables and tenements, by which the pure waters of the pond will be defiled,—dangers already threatened.

"The chance that this pond, situated in an extensive plain, with a range of high hills on three sides, in the midst of such a dense neighborhood as within a few years will exist around it, will become pestilential, and the certainty that, if defended and used as proposed, it will be of great sanitary advantage to the city, are considered to be conclusive reasons for this location. The Commissioners cannot too strongly urge the importance of early action in the premises in order to avert the danger and secure the benefit. The pond is a favorite resort of skaters in winter, and, to a limited extent, is used for boating in summer, and these will be encouraged and rendered more safe by police regulations. It lies between the four and four and one-half mile circles. Its chief approach from town will be by the Jamaica parkway (now Riverdale Improvement) which will skirt the eastern shore, while the western will be traversed by foot and

saddle paths. Notwithstanding the comparatively large amount of improvements, in the form of dwellings, ice-houses, etc., upon this location, the Commissioners are of the opinion that the cost will be justified by the exceptional character of the park."

The appropriation for Muddy-river lands was at the outset known to be inadequate, and this inadequacy has thus far prevented the laying out of this improvement as a public park. The additional amount required will be about two hundred thousand dollars; the amount appropriated being less by that amount than the stated requirements made at the time. Some additional land will also be required at the Longwood Entrance to Back Bay to widen and accommodate its lines to the outlines of the Riverdale Improvement. The amount for this purpose will be about fifty thousand dollars. Land will also be required for the parkways connecting Jamaica Park with the Arnold Arboretum and Franklin Park, part of which have already been secured in the taking of lands for the Arboretum. In its report for 1885 the Board recommended that an appropriation of one hundred thousand dollars be provided by a loan for this purpose.

In addition to these wants there will be a probable deficiency of three hundred and fifty thousand dollars to meet unsettled land damages, including the amounts of several verdicts already obtained. A map of a part of the park system, showing several of the parks and parkways as then proposed, was published in the Annual Report of the Board for 1881. This map is herewith reproduced in a new form to show the locations already secured and the additional lands required to complete the system.

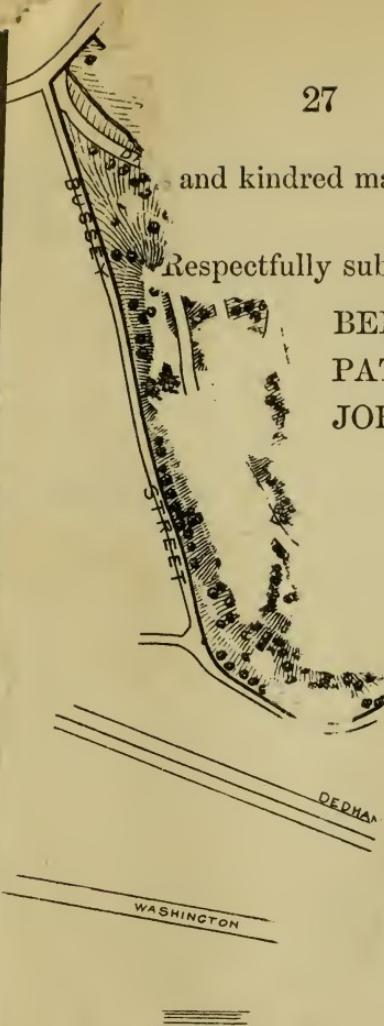
A report by the City Engineer, and copies of the Acts of the Legislature and orders of the City Council having refer-



and kindred matters, will be found in the

Respectfully submitted,

BENJAMIN DEAN,
PATRICK MAGUIRE,
JOHN F. ANDREW,
Commissioners.



APPENDIX.

OFFICE OF CITY ENGINEER,

CITY HALL, BOSTON, Jan. 17, 1887.

HON. BENJAMIN DEAN, *Chairman Board of Park Commissioners*:—

SIR,—I herewith submit the following report of work done and of other matters of interest in connection with the work placed under my direction by your Board:—

BACK BAY IMPROVEMENT.

At the beginning of the year no work was in progress. In February a freshet occurred which was the most severe one since work was begun upon this improvement. Rain began to fall on the morning of the 10th and continued until the afternoon of the 13th. The total precipitation was 5.86 inches, and the melting of the snow upon the ground added about two inches more. No injury was sustained at the Back Bay, and the covered channel, built under the direction of the Park Department, and the structures for controlling the flow of the water worked in a satisfactory manner.

A small amount of planting was done in April, but all work was suspended on April 19, the appropriation having been expended. During the year no other work has been done except such as was necessary for the preservation of the property.

ARNOLD ARBORETUM.

During the year no work has been done except to sprinkle the drive-way and keep it clean.

FRANKLIN PARK.

Estimates were made in January of the cost of construction of this park. During the year repairs upon the buildings to prevent their deterioration have been made, but no work has been done.

MARINE PARK.

The wooden pier, begun in 1885, was completed March 26. This structure was described in the report for 1885. In May and June the outer end of the pier for a length of 354 feet was covered with a roof. Provision was also made for lighting the pier. The refectory building was removed to a site adjoining the entrance to the pier, and connected with Q street by a broad plank-walk.

WOOD ISLAND PARK.

No work has been done here during the year.

CHARLES RIVER EMBANKMENT.

The contract for a sea-wall was signed Dec. 30, 1884, by Messrs. Parker & Sylvester, and work was commenced in April, 1885, and was prosecuted rapidly until the middle of September, when the work was partially suspended until an additional appropriation could be made. An appropriation of \$50,000 having been made in November, work was commenced early in the spring of 1886, and it was completed early in the fall.

The work done under this contract consists of a sea-wall and filling between the southerly side of Canal bridge and the north-easterly side of West Boston bridge. The original design was to build the wall generally 200 feet from and parallel with the west-easterly line of Charles street. This was modified by a change in the line near West Boston bridge, making but one angle in the length of the wall instead of two, as in Charles street.

At the two angles in the wall, as originally designed, it was intended to have boat-landings. The change of plan, however, obliterates one of these angles, and the boat-landing was moved to the West Boston bridge.

The sea-wall is about 2,223 feet in length, and is constructed of

MARINE PARK — TEMPORARY PIER AND REFECTIONY.



MARINE PARK — TEMPORARY PIER.



granite masonry laid in mortar ; it is 7.67 feet wide at the bottom, and 4.6 feet wide at the top, and is capped with a coping of dressed granite 5 feet wide. The granite backing of this wall was obtained from an old retaining wall on the shore line.

The foundation generally was a plank platform supported on piles ; but for a distance of 420 feet the material was excavated to ledge, and split-granite masonry was used, laid without mortar. The wall was backed with ballast, and its front was filled to the grade of the top of the platform with gravel, and protected by ballast.

The elevation of the top of the coping is 15 feet, and of the top of the timber platform 1.92 feet above city base.

The greater part of the filling of the space between the sea-wall and Charles street has been done with gravel dredged from Charles river, above the West Boston bridge, it being a part of the work included in the before-mentioned contract, and the remainder is being obtained from the Health Department, the Court-House Commissioners, and various other sources.

Respectfully submitted,

WILLIAM JACKSON,

City Engineer.

STATUTES OF THE COMMONWEALTH AND ORDERS
OF THE CITY OF BOSTON CONCERNING PUBLIC
PARKS AND RELATED MATTERS.

COMMONWEALTH OF MASSACHUSETTS

[CHAP. 178.]

In the Year One Thousand Eight Hundred and Eighty-five.

AN ACT TO LIMIT THE MUNICIPAL DEBT OF, AND THE RATE
OF TAXATION IN, THE CITY OF BOSTON.

*Be it enacted by the Senate and House of Representatives in General
Court assembled, and by the authority of the same, as follows:—*

SECTION 1. The taxes assessed on property in the city of Boston, exclusive of the State tax, and of the sums required by law to be raised on account of the city debt, shall not exceed in any year nine dollars on every one thousand dollars of the average of the assessors' valuations of the taxable property therein for the preceding five years, the valuation for each year being first reduced by the amount of all abatements allowed thereon previous to the thirty-first day of December in the year preceding said assessment. Any order or appropriation requiring a larger assessment than herein first above limited shall be void.

SECT. 2. The limit of indebtedness of the city of Boston shall hereafter be two and one-half per cent. up to and until the first day of January in the year eighteen hundred and eighty-seven, and thereafter shall be two per cent. on the average valuation prescribed in section one of this act, instead of three per cent. on the last preceding valuation, as provided in section four of chapter twenty-nine of the Public Statutes.

SECT. 3. Any court or justice having equity jurisdiction, sitting in the county of Suffolk, shall, upon the application of the Mayor or of ten taxable inhabitants of the city, at all times, whether in term time or vacation, have power to issue injunctions, manda-

tory or otherwise, decrees, or other process against the city council or otherwise, which such court or justice may think needful to enforce the provisions of this act or to prevent the violation thereof.

SECT. 4. This act shall take effect upon its passage.

[Approved April 17, 1885.]

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 65.]

In the Year One Thousand Eight Hundred and Eighty-six.

AN ACT EXTENDING THE TIME FOR THE COMPLETION OF THE PUBLIC PARK IN THE CITY OF BOSTON, KNOWN AS THE CHARLES RIVER EMBANKMENT.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The time within which the board of park commissioners of the city of Boston may build the sea-wall on the Boston side of the lower basin of Charles river, between Craigie's bridge and West Boston bridge, and may fill and fit up the grounds enclosed thereby for the purposes of a public park, as authorized by chapter ninety-two of the acts of the year eighteen hundred and eighty-one, and in accordance with the plans and specifications for said work heretofore duly approved and licensed by the board of harbor and land commissioners, is hereby extended one year, to wit: to the sixteenth day of March in the year eighteen hundred and eighty-seven.

SECT. 2. This act shall take effect upon its passage.

[Approved March 15, 1886.]

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 134.]

In the Year One Thousand Eight Hundred and Eighty-six.

AN ACT TO CHANGE A PORTION OF THE LINE OF THE SEA-WALL OF THE PUBLIC PARK IN THE CITY OF BOSTON, KNOWN AS THE CHARLES RIVER EMBANKMENT.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The ninety-second chapter of the acts of the year eighteen hundred and eighty-one, entitled “An Act in addition to An Act for the laying out of public parks in or near the city of Boston,” is hereby so far amended that the sea-wall therein authorized on the Boston side of Charles river between Craigie’s and West Boston bridges, may be built on or within the following lines instead of those defined in said act, namely: Beginning at a point on the southerly side of Craigie’s bridge distant two hundred feet perpendicularly from the westerly line of Charles street, and running thence southerly in a line parallel to said westerly line of Charles street to a point opposite the first angle in said street; thence turning a similar angle and running southerly in a straight line parallel to and two hundred feet distant perpendicularly from the westerly line of the next adjoining section of said Charles street, and extending in the same course to West Boston bridge.

SECT. 2. All of the other provisions of the act aforesaid shall apply to the lines and areas defined by this act, subject to the extension of time granted by chapter sixty-five of the acts of the present year for the completion of said sea-wall and other authorized work.

SECT. 3. This act shall take effect upon its passage.

[Approved April 9, 1886.]

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 199.]

In the Year One Thousand Eight Hundred and Eighty-six.

AN ACT TO AUTHORIZE THE CITY OF BOSTON TO PURCHASE THE PROPERTY OF THE JAMAICA POND AQUEDUCT CORPORATION.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The city of Boston, by the Boston water board, may purchase and hold all the property, estates, rights and privileges of the Jamaica Pond Aqueduct Corporation, incorporated by chapter one hundred and thirty-five of the acts of the year eighteen hundred and fifty-seven, and said Boston water board may, if the same shall be deemed expedient, connect Jamaica Pond and the pipes of said corporation so purchased with the other water-pipes of said city; but said city shall not hereby acquire any right to take ice from said pond, or to take land upon which any building or machinery is now erected, or which is now used in connection with such building or machinery for the purpose of storing ice, or for convenience in cutting, storing and moving ice, without the consent of the owner of said land and buildings or machinery; nor shall said city, by virtue of this act or by the purchase hereunder authorized, acquire any right to obstruct or in any manner interfere with the business of persons or corporations now engaged in cutting, storing, selling or moving ice from said pond, or with the rights of any other person or corporation in the water or ice of said pond, or in the lands bordering upon the same, except so far as the same shall be necessary, in raising or lowering the surface of the water of said pond, to the extent, or in protecting and preserving the purity of said waters, in the manner now authorized by law.

SECT. 2. This act shall not become valid until it has been accepted by the city council of the city of Boston, by a vote of two-thirds of the members of both branches thereof.

[Approved May 7, 1886.]

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 304.]

In the Year One Thousand Eight Hundred and Eighty-six.

AN ACT TO AUTHORIZE A LOAN FOR THE CONSTRUCTION OF PUBLIC PARKS IN OR NEAR THE CITY OF BOSTON.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. For the purpose of defraying the costs and expenses of constructing the parks established by the city of Boston, the city council of said city may, by a vote passed in the manner provided by section seven of chapter twenty-nine of the Public Statutes, authorize its treasurer to issue, from time to time, to the amount of five hundred thousand dollars each year, and to a total amount not exceeding two million five hundred thousand dollars, negotiable bonds or certificates of indebtedness, payable in not exceeding fifty years from their date and bearing interest at a rate not exceeding four per cent. per annum, to be denominated, on the face thereof, Public Park Construction Loan.

SECT. 2. Said treasurer shall sell said bonds and certificates, or any part thereof, from time to time, and retain the proceeds thereof in the treasury of the said city, and pay therefrom the expenses incurred for the purposes aforesaid.

SECT. 3. Upon the passage of the said vote the board of park commissioners of said city shall without delay proceed with the construction of said parks, and shall carefully and judiciously expend the amounts aforesaid in such construction.

SECT. 4. The debt and loans authorized by this act shall not be included within the limit fixed by section two of chapter one hundred and seventy-eight of the acts of the year eighteen hundred and eighty-five.

SECT. 5. This act shall take effect upon its passage.

[Approved June 21, 1886.]

CITY OF BOSTON,

IN BOARD OF ALDERMEN, June 1, 1886.

Ordered, That the Board of Park Commissioners be authorized to sell at public auction buildings or structures of any kind standing upon lands purchased or taken for park purposes, the proceeds thereof, and the proceeds from the sale of grass and wood from said lands, to be appropriated to the expenses incident to the care and maintenance of the public parks ; and the Auditor is hereby authorized to allow payment from said moneys for such expenses upon the requisition of said Board.

Passed: Yeas, 11; nays, none. Sent down for concurrence. June 3, came up concurred: Yeas, 59; nays, none.

Approved by the Mayor, June 5, 1886.

CITY OF BOSTON,

IN BOARD OF ALDERMEN, Sept. 27, 1886.

Ordered, That the Board of Park Commissioners be authorized to sell at public auction all old material in their possession not required for the use of the department, the proceeds thereof to be appropriated to the expenses incident to the care and management of the public parks ; and the City Auditor is hereby authorized to allow payment from the said proceeds for such expenses, upon the requisition of said Board.

Passed: Yeas, 12. Sent down for concurrence. Oct. 21, came up concurred: Yeas, 55; nays, none.

Approved by the Mayor, Oct. 23, 1886.

CITY OF BOSTON,

IN COMMON COUNCIL, Nov. 11, 1886.

Ordered, That all claims for reduction or abatement of assessments on account of the locating and laying out of the public parks be referred to the Joint Standing Committee on Claims, who shall consult the City Solicitor and report such settlements as they consider just and equitable.

Passed. Came up for concurrence. Concurred, Nov. 15.

Approved by the Mayor, Nov. 16, 1886.

CITY OF BOSTON,

IN BOARD OF ALDERMEN, Dec. 15, 1886.

Ordered, That in the several suits for abatement of the Franklin Park betterment assessments, the city solicitor be and he hereby is authorized to consent to judgment abating said assessments to an amount equal to ninety-five per cent. of the amount assessed, but in each case without costs and without interest.

Passed. Sent down for concurrence. Dec. 16, came up concurred.

Approved by the Mayor, Dec. 20, 1886.

CITY OF BOSTON,

IN BOARD OF ALDERMEN, Dec. 27, 1886.

Ordered, That the City Auditor be authorized to transfer from the appropriation for Franklin Park the sum of twenty-three thousand (23,000) dollars, said sum to be set aside for the purchase of additional land for Franklin Park.

Passed: Yeas, 11; nays, 1. Sent down for concurrence. Dec. 30, came up concurred: Yeas, 59; nays, 3.

Approved by the Mayor, Jan. 1, 1887.

CITY OF BOSTON,
IN BOARD OF ALDERMEN, Dec. 27, 1886.

Ordered, That the Board of Park Commissioners be hereby authorized to purchase of William S. and George W. Bond, for park purposes, a parcel of land containing 81,090 square feet, more or less, and situated at the corner of Sigourney and Walnut streets; the expense thus incurred not to exceed the sum of twenty-three thousand dollars, and to be charged to a special appropriation for the purchase of additional land for Franklin Park, on condition that the said purchase shall not in any way relieve the said William S. and George W. Bond from their obligation to pay the betterment assessed upon said land on account of the laying out of Franklin Park, and also the taxes assessed thereon for the year 1886.

Passed. Sent down for concurrence. Dec. 30, came up concurred.

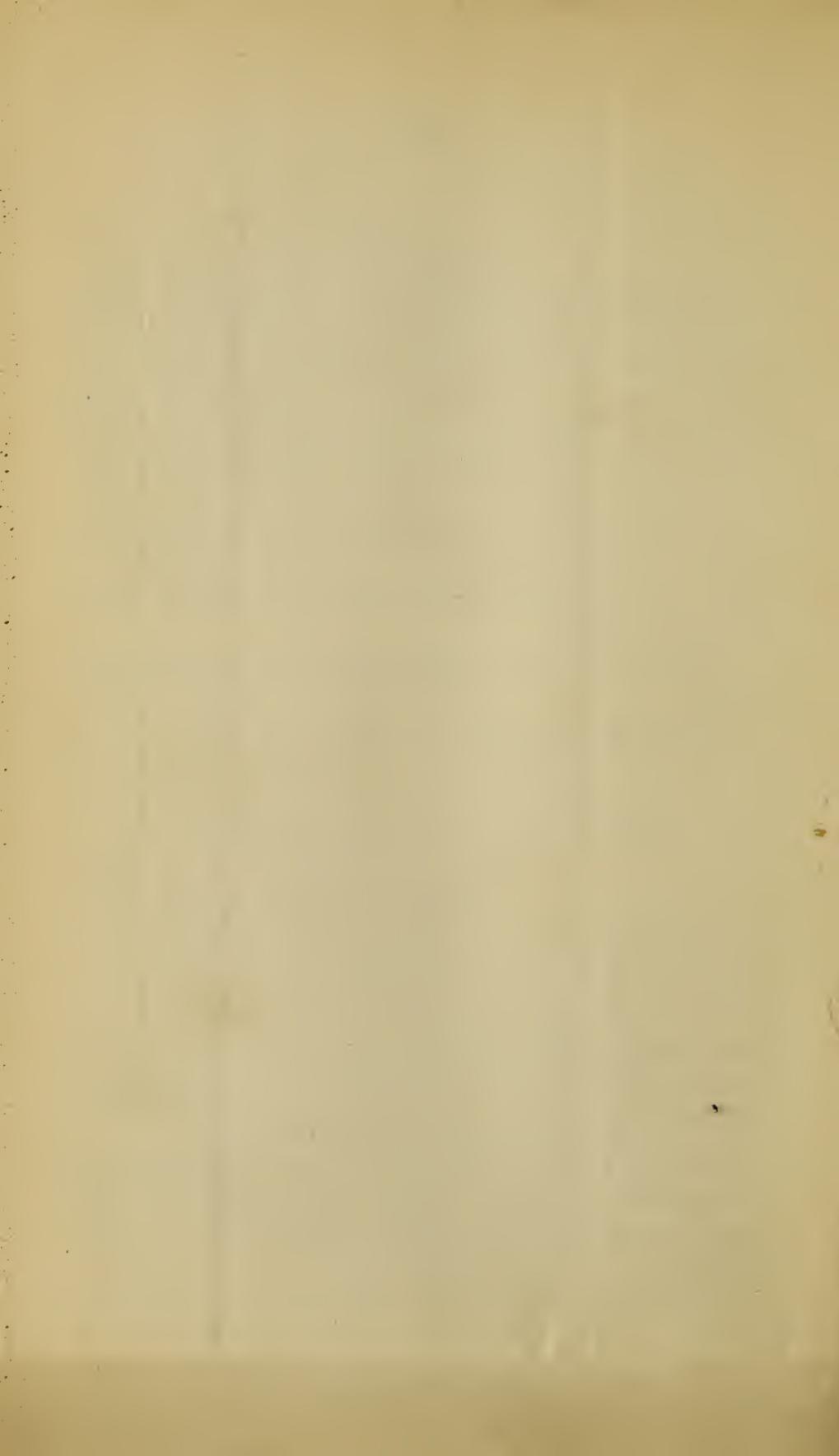
Approved by the Mayor, Jan. 1, 1887

CITY OF BOSTON,
IN BOARD OF ALDERMEN, Jan. 3, 1887.

Ordered, That, for the purpose of defraying the costs and expenses of constructing the parks established by the City of Boston, the City Treasurer is hereby authorized to issue from time to time, to the amount of \$500,000 each year, and to a total amount not exceeding \$2,500,000, negotiable bonds or certificates of indebtedness, payable in 50 years from their date, and bearing interest at a rate not exceeding 3 per cent. per annum, to be denominated, on the face thereof, "Public Park Construction Loan."

Passed, all rules of the Board and all joint rules having been first suspended: Yeas, 9; nays, 3. Sent down for concurrence. Came up concurred, all joint and Common Council rules being first suspended: Yeas, 49; nays, 17.

Approved by the Mayor, Jan. 4, 1887.



*OBSERVATIONS. Divisions o
which for convenience of d*

A	<i>THE COUNTRY PARK</i>	E
B	<i>THE PLAYSTEAD</i>	F
C	<i>THE GREETING</i>	G
D	<i>THE MUSIC COURT</i>	H

A THE COUNTRY PARK. The entire special advantages for one purpose of recreation to be obtained only by the sensibilities of those quietly situated in this division designated "The exclusiveness, for this value for any other division at no other place." The

OFFICE OF
CITY ENGINEER,
BOSTON.

PROCEEDINGS.

THE taking of land having been completed, instructions were given for the preparation of a plan in general accordance with the views which had determined the locality and the limits of the proposed park. In December, 1884, a series of propositions in regard to the principal features of the plan were submitted and approved by the Board. In the spring of 1885 a preliminary drawing of the plan was submitted, and, to facilitate discussion, the lines of it were fully staked on the ground and followed out by the Commissioners. After debate this study, with some immaterial variations, was approved as the basis of the final plan. Later, a change in the membership and a re-organization of the Board having occurred, the preliminary plan was reviewed and found acceptable. Still later the Commissioners, to be satisfied as to various conditions of park economy, visited and made a comparative examination of several large parks in use.

January 30, 1886, at a meeting of the Commissioners held at the office of the Landscape Architect on the park site, the Mayor being present, the finished general plan was presented and considered.

February 10, the Commissioners voted as follows:—

- (1) That the plan prepared by the Landscape Architect, now before the Board, is adopted as the Plan of Franklin Park.
- (2) That the Landscape Architect is requested to prepare a statement for publication explanatory of the plan, and setting forth the views of the undertaking that he has presented to the Board.

GEORGE F. CLARKE,
Secretary.

CITY OF BOSTON.

PARK DEPARTMENT.

NOTES ON THE PLAN

OF

FRANKLIN PARK

AND

RELATED MATTERS.

PRINTED FOR THE DEPARTMENT.

1886.

CONTENTS.

INTRODUCTION.

	PAGE
PUBLIC OPINION COMPARATIVELY ILL-PREPARED TO SUSTAIN AN ECONOMICAL MANAGEMENT OF A LARGE PARK WORK	7

PART FIRST.

THE CONDITION OF BOSTON IN REGARD TO PROVISIONS FOR VENTILATION AND URBAN RECREATION	19
--	----

PART SECOND.

THE PLAN OF FRANKLIN PARK	39
I. OF CERTAIN CONDITIONS OF THE SITE	39
II. THE PURPOSE OF THE PLAN	41
III. A REVIEW OF THE PLAN BY DIVISIONS	49
IV. A REVIEW OF THE GENERAL LANDSCAPE DESIGN	60
DRIVES AND WALKS	63
RIDING PAD	64
ENCLOSURES	64
ENTRANCES	64

PART THIRD.

THE KEY OF A CONSERVATIVE PARK POLICY, AND THE COST OF CARRYING OUT THE PLAN UNDER SUCH A POLICY	69
A BRIEF HISTORY OF THE RURAL PARK OF BUFFALO, WITH REFERENCE TO ITS MANAGEMENT, COST, AND VALUE	78
THE MAINTENANCE COST OF PARKS	83

PART FOURTH.

	PAGE
OF THE DIFFICULTIES OF PURSUING A SOUND POLICY, AND THE MEANS BY WHICH THEY ARE TO BE OVER- COME.	89
I. OF THE SUPREME IMPORTANCE THAT A LARGE PARK MAY COME TO HAVE IN THE HISTORY OF A CITY	90
II. THE ELEMENT OF LASTINGNESS AS AFFECTING THE IMPORT- ANCE OF WHAT IS TO BE DETERMINED IN THE EARLY WORK OF A PARK	95
III. THE EARNINGS OF A PARK TO A CITY ACCRUE LARGELY THROUGH THE LESS CONSPICUOUS USE OF IT, AND THROUGH THE USE OF THE LESS CONSPICUOUS PARTS OF IT	99
IV. THE ADAPTATION OF THE PARK TO THE USE OF INVALIDS .	103
V. THE VALUE OF A RURAL PARK TO THE PARTS OF A CITY MORE DISTANT FROM IT	105
VI. THE BEARING OF THE DIFFICULTIES THAT HAVE BEEN RE- VIEWED UPON THE MAIN END OF THESE NOTES	106

PART FIFTH.

THE PARK AS A DEPARTMENT OF EDUCATION	113
---	-----

INTRODUCTION.

IN the course of the series of notes to follow, reasons will be given for thinking that what shall occur in the history of Franklin Park during the next few years, whether the undertaking be much advanced or little, will determine results of greater lasting consequence to the city than those of any other of its public works of the present time. Therefore, in connection with an exposition of the plan for the park, various facts and considerations are to be presented, bearing upon the policy of the city in dealing with it.

An addition to the numerous, extensive, and varied public grounds now available to the people of Boston, of a body of land in one block of the extent, situation, and topographical characteristics of that to be reviewed, would have been a proceeding of great extravagance and folly, unless made with regard to a purpose for which no provision existed or could be made upon those grounds.

It may be held also that to justify the undertaking, this distinctive purpose should have been one through success in which the city's rate of taxation might be expected to be reduced, and this in a manner to benefit all its people of whatever condition and in whatever parts of it domiciled.

It is believed that such a purpose may be defined, and that

the land taken for Franklin Park may be shown to be neither of greater extent than is needed, nor in any essential respect unsuitable to the pursuit of it. It is believed to be perfectly practicable, as the business now stands, to secure results more valuable and less costly than the most sanguine promoters of the scheme have heretofore been authorized to promise.

It must nevertheless be recognized that there has been much in the experience of other cities to justify fear that the work will grow to be a very costly one.

How is this danger to be met?

What is first of all necessary is that those who are alive to it should not be content to remain under a mere blind apprehension, moving to a distrustful, hesitating attitude, favoring a desultory, devious and intermittent advance of the work. They must seek to clearly understand, through a closer study than is often made of the history of the large park works of other cities, in what the danger of extravagance consists.

Reasons will be given for believing that such a study will result in a conviction that it consists mainly in the prevalence, during the earlier years of such undertakings, of vague, immature, conflicting, and muddled ideas of their purpose, and a consequent tendency to fritter away the advantages of the ground upon results that pass for collateral, but are really, for the most part, counteractive of their main design. These ideas lead to expectations, disappointments, customs, demands, that become important factors in determining the character of the park. If a notable number of the people, though a minority of all, come to suppose that it is not being prepared to meet expectations they may have happened, even though inconsiderately, to have formed, it is quite possible that their influence will compel the work to proceed upon a fluctuating plan to a degree that would be generally recognized to be

scandalously wasteful in any other important class of public works.

What has been done thus far in the undertaking of Franklin Park, encourages a belief that the danger is less in Boston than it has been found to be in other communities. But if any one doubts that it exists and is to-day the chief difficulty in the way of a successful prosecution of the enterprise, let him first consider that the proposition to form a large rural park for the people of Boston has already been before them at least twenty years, that it has been annually debated in the City Council seventeen years, and in the form of a distinct project has been ten years before an executive department of the government expressly formed to advance it; that from year to year it has been brought up freshly in the Mayors' messages, in reports of Commissioners and Committees, and in proceedings of public meetings reported and discussed by the press. A site for it has been obtained and preliminary work for its improvement has been two years in progress.

These circumstances borne in mind, let a judgment be formed of the standing which this park project has at the present moment in the minds of any considerable number of citizens to whom it is not in some way a matter of special personal interest, in comparison with the standing had in the minds of a similar body, of projects of other sorts of public works at corresponding periods.

Let those projects be taken, for example, by the successive carrying out of which the present complex system of water-works for the city has come to be what it is. Of the uses and consequently of the practical value of water, every one knows something experimentally. Every one knows that water may be held in a vessel or reservoir, and that through an outlet at its bottom it will run from this vessel downward wherever a

way is opened. With this knowledge, the conditions of efficiency of various proposed new works for supplying water have been easily comprehended, and the value of what has been aimed to be accomplished has been generally appreciated.

So it has been with all other important public works of the city. The benefits to be gained by the people, for example, through various important steps in the improvement of the sewer system have been matters of clear-headed popular discussion. Even the questions at issue between the engineers in this respect have been generally fairly well understood. It was the same as to the advantages to be gained by the substitution of steam for hand fire-engines, and of horse power for man power in moving them, and many other modern improvements. The same as to the Public Library and as to the Court House. By comparison it will be seen that such notions as prevail of the benefits to be realized through outlays to be made by the city on the body of land of five hundred acres bought for a purpose defined as that of "a park," are not only varied and conflicting between different men, but in each man's mind are apt to be wanting in practically serviceable clearness and definiteness.

That this is the case even with many who suppose themselves better informed than most, may appear a more reasonable assumption if the fact can be established that while the business of forming a large park and bringing it into suitable use is one in which the government and people of the city have no local experience, it is also one of which less is to be learned by casual observation than of most others in which cities commonly engage.

Let it be considered, then, that the persons who manifest the highest sense of the value to themselves individually of a park, in all large cities, are not those who in the aggregate

resort most to it, and, as a body, benefit most by it. They are those to whom time, because of the weight of affairs resting upon them, is most valuable, and to whom an alert working condition of mind and body is worth the most money. In Paris and London, New York and Chicago, many of this class may be found for a certain time daily in a park. It is almost as fixed a habit with them to go there at a certain hour, as at certain other hours to go to their meals or to repose. It is not a matter of fashion or social custom, for their manner of using the park varies: some of them walking, others driving, others riding; some pursue their course alone, others seek company, some keep to the main thoroughfares, others seek the secluded parts. With some men of much public importance now in New York, their present habit of using the park, began when the first section of it was opened to public use, seven-and-twenty years ago.

It will be obvious that the manner in which such men, making such use of a park, find it of value is not that in which a stranger or an occasional visitor finds it interesting; and, looking further, it may be recognized that the benefits of a park to the people of a city, of all classes and conditions, come chiefly in a gradual way, through a more or less habitual use of what it provides, and that such benefits are neither experienced nor are the conditions on which they depend apt to be dwelt upon by an occasional observer, to whom the interest of a visit unavoidably lies largely in the comparative novelty to him of what he sees. Neither do the gains in value of the park in this more important respect often engage the attention of the press. Columns will necessarily be given to the introduction of a statue, or a new piece of masonry, or a novelty in horticulture, for every line to the development of the essential constituents of the park, or the eradication of obstructive con-

ditions. The eyes of a frequenter of a park rarely rest for a moment on objects before which strangers generally halt. A park may affect a man at the first visit exhilaratingly, which, when he is accustomed to the use of it, will have a reverse, that is to say, a soothing and tranquillizing effect. Thus, that only is of much solid and permanent value to a city in a park which increases in value as it becomes less strikingly interesting, and of that which has value in this way, an occasional visitor is apt to be in a great degree oblivious. No guide book calls his attention to it. No friend can bring it home to him.

As an illustration of the wrong impressions that are naturally propagated in the manner thus suggested, it may be said that the costliness of certain parks is habitually assumed by many intelligent men to have been chiefly in outlays for what is called "decoration." This term is not thus applied to trees, plants, and turf; to the plain work, however good, of substantial structures, nor to gracefulness or picturesqueness of modelling in graded surfaces, but first to objects which are merely decorative, such as fountains, vases, artificial rock-work, pagodas, temples, kiosks, obelisks, or other independent structures; and, second, to works of decoration superadded to structures for use, such as crestings, carvings, mosaics, mouldings, flutings, panellings, and the like. The fact is that no large part of the cost of any great park has been for these purposes. Of upwards of ten millions of dollars paid by cities upon the certificate of the writer, it is believed that less than four per cent has been for such decorative work. On the Buffalo Park, than which none is more satisfactory to the people, the outlay for decorative work is reckoned not to have exceeded one half of one per cent. And it may be added, with respect to another form of this error, having its

origin probably in early impressions from superficial and incomplete observation, that the value of no rural park to the people who habitually use it would be seriously impaired if every scrap of ornament to be found upon it should fall to decay or be effaced, except as the spaces left unfurnished would appear shabby and incongruous with the general character of the place. Beyond question, the value of many large parks would be increased by the removal of a variety of objects which, when introduced, were thought to be desirable acquisitions.*

In one of the notes to follow it will be shown that the confusion of the popular mind in the early years of a large park work which has been described gradually passes off with an experience of the benefits resulting from an habitual use of the finished ground. The chief peril from it occurs during the period of constructive operations, and before any important results of growth have been attained. For this reason, it is important that those who may be able to aid in moulding a sound public opinion should see how the difficulty of working out of the confusion is increased by a common equivocal use of certain terms applicable to park work.

There is a space in Boston called Park Square, and in it there has lately been a sign with the inscription, "Park Square

* Consistently with this view is Hamerton's observation that "very much of the impressiveness of natural scenery depends on the degree in which mass predominates over details." The chief advantage of the "new" (of the last century) over the old gardening was found in the fact that while works of the latter might be striking and impressive as they were to be seen for a moment from particular points of view, and might have an endless number of interesting points of detail, these advantages were greatly outweighed by the more sustained, comprehensive, and pervading pleasantness of the simpler, unostentatious, and uneventful work of the "new gardening." This advantage is easily dissipated on a public park. Where it is to be largely so by the introduction of numerous objects of special admiration, it would be better to adopt thoroughly the old architectural motive.

Garden." There is neither a park nor a square nor a garden in the vicinity, nor has there been. The word park is applied in a similar loose way to various comparatively small public spaces which are otherwise more discriminately called Greens, Commons, Squares, Gardens, and Places. In most considerable cities there is now to be found a ground called a park to which none of these names are applied. It is a ground more or less well adapted to serve a purpose that cannot be served on the smaller class of grounds. Such a ground is therefore a park distinctively,—a park proper. But it thus occurs that when a large space of ground is taken by a city for the purpose of a park proper, there is a tendency to regard it simply as a larger provision for the same ends with those which Commons, Greens, Squares, and Gardens are adapted to serve, and the real park is looked forward to not a little as it might be if it were to be in effect an aggregation or a combination and improved form of various smaller public grounds.

Even though, when ground is taken for a park proper, it may be understood that a purpose distinct from any or all of the purposes of these smaller grounds is had in view, this tendency leads propositions to be urged as to the uses to which it shall be put, and the way in which it shall be fitted and furnished, that common sense would otherwise recognize as propositions to set aside the distinctive purpose of the park.

Such confusion as may naturally occur in the way that has been thus explained is apt to be aggravated by the additional circumstance that the word landscape is constantly used, is used even by eminent writers, confoundingly, with reference to two essentially distinct arts. One of these arts is inapplicable to the smaller grounds of a city, but fully applicable to a large ground; the other is a decorative art, applicable to all forms and conditions of ground in which vegetation is possible, avail-

able for the smallest city grounds, and often, as for years past in Boston, practised upon small grounds with results most gratifying to the public. With such results, that to be wisely had in view in the undertaking of a rural park is scarcely more to be brought in comparison than the results proper to a Public Library building with those proper to a Court House, those of a church with those of a theatre.

The object of these notes is to give reasons for the convictions that have been thus expressed, and, in a measure, to meet in advance the dangers that have been indicated. This object obliges an exposition of the subject, under various heads, from many points of view. It is not to be expected, with the present slight public interest in the scheme of the park, that such an exposition will have many readers; but should it have none, proper respect for the future interest of the public in the matter requires a somewhat detailed record of the groundwork of the plan, of the expectations with which the work is entered upon, and of the foreseen conditions of its successful prosecution.

For those who may wish to obtain in the briefest possible way a slight general knowledge of what is intended, the drawing illustrative of the plan hereto attached, with which a concise statement is printed explanatory of the design, will be independently distributed in the form of a broadsheet, and it is hoped that with such aid as the public journals may see fit to give the purpose, an understanding of what is to be reasonably expected of the park may become common before customs in the use of it, growing out of different expectations, can be established.

PART FIRST.

PART FIRST.

A CONSIDERATION OF PUBLIC PROPERTIES IN OR NEAR BOSTON AVAILABLE FOR OCCUPATION OTHERWISE THAN BY BUILDINGS OR FOR THOROUGHFARES.

AMONG habits of thought that we have by inheritance there is one which is evinced in the custom of speaking of public grounds comprehensively and indiscriminately as "the lungs" of a city, "ventilating-places," "breathing-holes," and "airing-grounds."

This habit originated in walled towns, with extremely narrow, crooked streets, half built over, in which all the filth and garbage of dwellings was deposited, and often remained until flushed out by heavy rains. In such cities of fifty thousand inhabitants, the deaths due to foul air were larger than they now need be in cities of five hundred thousand.

With it has come down to us a subtle disposition,—the ghost of a serious, solid, and firm-footed ancestral conviction,—by which we are often influenced in dealing with questions of public grounds more than we are aware. It is a disposition to assume that the chief value of such grounds is that of outlets for foul air and inlets for pure air, and to regard whatever else our taxes are required to provide upon them in the character of a comparatively trifling luxury, adding something to the pleasure of life, no doubt, like sweet things after dinner, or buttons on the back of a man's coat, or the "gingerbread work" of a ship, but supplying almost nothing of solid sustenance and strength.

A wholly different understanding of the use of public grounds has long since begun to prevail; yet we are so much haunted by the old idea that we are rarely able to take clear, business-like views of the conditions of value in their equipment.

Even those who have been advocating the great addition lately made to the ground reserved from building within the city of Boston, have frequently made the sanitary requirement of airing-spaces in the midst of a city, and the need of providing them well in advance of the line of compact building, their main argument. Let it be supposed that the term "airing-place," as now used, means a little more than it once did; that it means a place to which people shall be drawn by various attractions, and having been drawn shall be induced to exercise in such a manner as to quicken their circulation and give their lungs a good cleansing of fresh air; it is yet an error fruitful of bad management and of waste to suppose that such an undertaking as this of Franklin Park is to be justified on that ground.

This will be better seen and several other considerations affecting the problem of the plan, will be made plainer if the advantages which the people of the city now hold with respect to airing-grounds are passed in review.

To aid a cursory examination of them the accompanying map has been prepared, showing the city and so much of its outskirts as can conveniently be brought within the limits of the sheet, and indicating one hundred and eighty-six localities, in each of which there is now a body of land, great or small, serving, or available to serve, at least a ventilating purpose. Of these, seventy-one have been already "improved," are now in process of improvement, or are held with a definite intention of improvement, with a view to recreative qualities, as for example, by being turfed and planted. Fifty-six of these are public squares, commons, or gardens, of the city of Boston proper, the number of these much exceeding that of the same class of grounds of the united cities of New York and Brooklyn. Thirty-nine are burial grounds, most of them small,

ancient, and disused. These are not likely to be built upon, and should the course now being pursued in London and other old cities be followed, as in time it probably will be, most of them will eventually be made public groves and gardens. At least they will be verdurous breathing-places. Forty-seven are lands which in various ways have come into the possession of the city, and may at any time be sold when the government thinks it wise to part with them. Their bearing on the present subject is this, that when it shall be thought that additional urban grounds are needed in any part of the city, it will not always be necessary to make a special purchase of land to supply sites for them. Many of these properties, for instance, are well situated for playgrounds for school children, and could be adapted to that use at moderate expense. Others, smaller, are available for open-air gymsnasiums.

Within the city of Boston, or close upon its border, there are nearly two hundred public properties which are not held with a view to building over them, and most of which are secured by legal enactments from ever being built over. Omitting the larger spaces recently acquired and held by the Department of Parks, these grounds are on an average thirteen acres each in area. Omitting the islands, the burial grounds, the larger grounds of the Department, and all that would not ordinarily be classed with "city squares and gardens," the latter have an average area of about four acres each.

The area of the entire number of public properties numbered on the map, and of which a classified list follows showing the situation and area of each, is 3356.63 acres, or over five square miles. Of those likely to be permanent green oases among the buildings of the city, the area is about four square miles, or nearly as much as the entire building space within the walls of some cities that had great importance in the world when the building of Boston was began.

I.—*Properties now appropriated to the purpose of public refreshment as recreation grounds or “breathing-places.”*

Name.	Location.	Area.	Remarks.
CITY PROPER.			
9. Common . . .	Park, Tremont, Boylston, Charles, and Beacon Sts. . .	48.25 acres.	{ Enclosed by an iron fence.
10. Public Garden .	Charles, Boylston, Arlington, and Beacon Sts.	24.25 "	" "
8. Fort-Hill Square .	Oliver and High Sts.	29,480 sq. ft.	
21. Franklin Square .	Washington, East Brookline, East Newton, and James Sts.	2.42 acres.	
20. Blackstone Sq. .	Washington, West Brookline, West Newton Sts., and Shawmut Ave.	2.41 "	
34. East Chester Park .	Between Albany St. and Harrison Ave.	9,300 sq. ft.	{ Malls enclosed by an iron fence.
30. Chester Park .	Between Harrison Ave. and Washington St.	13,050 "	" "
29. Chester Square .	Between Washington and Tremont Sts.	1.70 acres.	" "
19. West Chester Park	Between Tremont St. and Columbus Ave.	10,150 sq. ft.	" "
13. Commonwealth Avenue	From Arlington St. to West Chester Park (malls)	9.86 acres.	" "
17. Union Park	Between Tremont St. and Shawmut Ave.	16,000 sq. ft.	" "
31. Worcester Square .	Between Washington St. and Harrison Ave.	16,000 "	" "
3. Lowell Square .	Cambridge and Lynde Sts.	5,772 "	" "
12. Square	Columbus Ave., Eliot and Pleasant Sts.	2,867 "	" "
16. Montgomery Sq. .	Tremont, Clarendon, and Montgomery Sts.	550 "	" "
5. Pemberton Sq. .	Between Tremont Row and Somerset St.	3,390 "	" "
14. Copley Square .	Between Huntington Ave., Boylston and Dartmouth Sts.	28,399 "	{ Enclosed by a granite curb.
15. Trinity Triangle .	Between Huntington Ave., Trinity Pl., and St. James Ave.	5,410 "	" "
2. Charles River Embankment . .	Between Canal and West Boston Bridges	10.00 acres.	Park Department
ROXBURY DISTRICT.			
42. Madison Square .	Sterling, Marble, Warwick, and Westminster Sts.	2.81 acres.	
46. Orchard Park .	Chadwick, Orchard-Park, and Yeoman Sts.	2.29 "	
56. Washington Park .	Dale and Bainbridge Sts.	9.09 "	
37. Longwood Park .	Park and Austin Sts.	21,000 sq. ft.	
58. Walnut Park .	Between Washington St. and Walnut Ave.	5,736 "	
41. Lewis Park	Highland St. and Highland Ave.	5,600 "	
52. Bromley Park .	From Albert to Bickford St.	20,975 "	
57. Fountain Square .	Walnut Ave., from Munroe to Townsend St.	2.66 acres.	Three enclosures.
49. Cedar Square .	Cedar St., between Juniper and Thornton Sts.	26,163 sq. ft.	
40. Linwood Park .	Centre and Linwood	3,625 "	{ Enclosed by stone curb.
59. Public Ground .	Centre and Perkins Sts.	3,200 "	
26. Riverdale and Back Bay . .	Between Beacon and Perkins Sts.	216.00 acres.	Park Department.

I.—*Properties, etc., continued.*

Name.	Location.	Area.	Remarks.
SOUTH BOSTON.			
71. Telegraph Hill	Thomas Park	4.36 acres.	
65. Independence Sq.	Broadway, Second, M, and N Sts.	6.50 " "	{ Enclosed by an iron fence.
66. Lincoln Square	Emerson, Fourth, and M Sts.	9,510 sq. ft.	" "
67. Marine Park	City Point	about 40 ac.	Park Department.
DORCHESTER DIST.			
77. Dorchester Square	Meeting House Hill	1.29 acres.	{ Soldiers' Monument on this Sq.
78. Eaton Square	Adams and Bowdoin Sts.	13,280 sq. ft.	
80. Mt. Bowdoin Green	Top of Mt. Bowdoin	25,170 "	{ Enclosed by stone curb.
WEST ROXBURY DIST.			
93. Public Grounds	Shore of Jamaica Pond	31,000 sq. ft.	
94. Soldiers' Monument Lot	South and Central Streets	5,870 "	
97. Franklin Park	Sever, Blue Hill Ave., and Morton Centre, South, and Bussey Sts.	518 acres. 167 "	Park Department. " "
96. Arboretum	Top of Mount Bellevue	27,772 sq. ft.	
110. Public Grounds	Franklin Ave. and Hamilton St.	30,000 "	
109. Franklin Park			
BROOKLINE.			
116. Play Grounds	Cypress Street	5.27 acres.	
115. Play Grounds	Brookline Avenue	3.83 "	
BRIGHTON DISTRICT.			
123. Public Grounds	Pleasant and Franklin Streets	1,900 sq. ft.	
128. Massachusetts Avenue	Brighton Avenue to Chestnut Hill Reservoir	47.13 acres.	
130. Jackson Square	Chestnut-Hill Avenue, Union, and Wmship Streets	4,300 sq. ft.	{ Enclosed by stone curb.
129. Brighton Square	Between Chestnut-Hill Avenue and Rockland Street, and opposite Branch of Public Library	25,035 "	
CAMBRIDGE.			
141. Commons	North Avenue	10.29 acres.	Four enclosures.
140. Winthrop Square	Brighton and Mount Auburn Sts.	10,236 sq. ft.	
146. Broadway Park	Broadway	2.46 acres.	
147. Dana Square	Magazine Street	33,531 sq. ft.	
149. Washington Sq.	Grand Junction Railroad	42,123 "	
148. Hastings Square	Brookline Street	29,999 "	
SOMERVILLE.			
143. Broadway Park	Broadway and Mystic Avenue	15.90 acres.	
144. Public Park	Highland Avenue, School and Walnut Streets	12.60 "	
CHARLESTOWN DIST.			
153. Sullivan Square	Main and Sever Streets	1.30 acres.	
154. Public Grounds	Essex and Lyndeboro' Streets	930 sq. ft.	
160. Monument Square	High, Concord, and Lexington Sts.	3.80 acres.	{ Bunker Hill Monument on this Sq.

I.—Properties, etc., continued.

Name.	Location.	Area.	Remarks.
CHARLESTOWN DIST. CONTINUED.			
161. Winthrop Square	Winthrop, Common, and Adams .	38,450 sq. ft.	{ Enclosed by an iron fence. Soldiers' Monument on this square.
162. City Square . . .	Head of Bow and Main.	8,739 "	{ Enclosed by stone curb.
163. Public Grounds {	Water Street, Charles River and } Warren Avenues	3,055 "	" "
EAST BOSTON DIST.			
172. Maverick Square .	Sumner and Maverick.	4,398 "	{ Enclosed by iron fence.
170. Central Square .	Meridian and Border	32,310 "	" "
173. Belmont Square {	Webster, Sumner, Lamson, and } Seaver	30,000 "	" "
166. Putnam Square .	Putnam, White, and Trenton . .	11,628 "	" "
167. Prescott Square .	Trenton, Eagle, and Prescott . .	12,284 "	" "
174. Wood Island Park	Wood Island	81.3 acres.	Park Department.

II.—Burial Grounds, etc.

Name.	Location.	Area.	Remarks.
CITY PROPER.			
1. Copp's Hill	Charter and Hull Streets	2.04 acres.	Owned by the city.
6. King's Chapel	Tremont and School Streets	19,200 sq. ft.	" "
7. Granary	Tremont near Park Street	1.88 acres.	" "
11. Central	On the Common	1.38 "	" "
22. South {	Washington, near East Newton } Street	1.72 "	" "
ROXBURY DISTRICT.			
43. Eliot	Washington and Eustis Streets . .	34,700 sq. ft.	Owned by the city.
47. Warren	Kearsarge Avenue	1.25 acres.	" "
48. Catholic	Circuit Street	15,000 sq. ft.	" "
SOUTH BOSTON.			
68. Hawes and Union .	Fifth Street	16,800 sq. ft.	Owned by the city.
69. St. Augustine . .	Sixth and Dorchester Streets . .	1.00 acre.	" "
DORCHESTER.			
72. Dorchester North .	Stoughton and Boston Streets . .	3.10 acres.	Owned by the city.
83. Old Catholic	Norfolk Street	12.00 "	" "
84. Codman	Norfolk Street	3.76 "	Owned by the city.
90. Cedar Grove	Adams Street	42.01 "	" "
91. Dorchester South .	Dorchester Avenue	2.00 "	" "





II.—Burial Grounds, etc., continued.

Name.	Location.	Area.	Remarks.
WEST ROXBURY.			
101. Forest Hills . . .	Morton Street	176.83 acres.	
102. Old Catholic . . .	Hyde Park Avenue	1.25 "	
103. Mount Hope . . .	Walk Hill Street	106.75 "	Owned by the city.
104. Mount Calvary . . .	Canterbury Street	41.95 "	
105. Walter Street . . .	. . . . .	39,216 sq. ft.	Owned by the city.
106. Centre Street . . .	. . . . .	39,450 "	" "
107. Mount Benedict . . .	Arnold Street	86.05 acres.	
113. Catholic . . .	Grove Street	5.09 "	
114. Hand-in-Hand . . .	Grove Street	2.50 "	
BROOKLINE.			
117. Walnut Street . . .	Brookline	1.42 acres.	
121. Holyhood . . .	Heath Street	about 30 acres.	
122. Walnut Hills . . .	Grove Street	" 30 "	
BRIGHTON DISTRICT.			
126. Market Street . . .	Chestnut-Hill Avenue	18,000 sq. ft.	Owned by the city.
133. Evergreen . . .	Chestnut-Hill Avenue	13.83 acres.	" "
CAMBRIDGE.			
139. Old Burying Ground	North Avenue	2.04 acres.	
138. Cambridge Cem- etery	Coolidge Avenue	40.81 "	
137. Mt. Auburn	Mt. Auburn Street	136.00 "	
136. Catholic	Cottage Street	8.39 "	
SOMERVILLE.			
145. Cemetery	Somerville Avenue	30,500 sq. ft.	
CHARLESTOWN DIST.			
155. Catholic	Bunker Hill and Medford Sts. .	1.68 acres.	
156. Bunker Hill St.	Between Elm and Polk Streets .	1.10 "	Owned by the city.
157. Old Burial Grounds	Phipps Street	1.76 "	" "
EAST BOSTON.			
168. Bennington St.	Swift and Bennington Streets . .	3.62 acres.	Owned by the city.
169. Ohabei Shalom	Wordsworth and Homer Sts. . .	1.38 "	

III.—Parcels of Land within which there are Reservoirs or other appurtenances of Public Water Works but which are partly available for and generally in use as Public Pleasure Grounds.

Name.	Location.	Area.	Remarks.
BOSTON WATER WORKS.			
50. Highland Park Stand Pipe . . . }	Fort Avenue, Roxbury	2.62 acres.	
39. Parker Hill Reservoir . . . }	Fisher Avenue, Roxbury	4.54 "	
70. South Boston " "	Telegraph Hill	2.89 "	
120. Brookline "	Boylston Street, Brookline	35.00 "	
119. Fisher Hill "	Fisher Avenue, Brookline	10.55 "	
134. Chestnut Hill "	Brighton District	212.75 "	
165. East Boston "	Eagle Hill	4.96 "	
BROOKLINE WATER WORKS.			
118. Reservoir Lot . . .	Fisher Avenue, Brookline	4.86 acres.	

IV.—Grounds in Connection with Public Institutions.

Name.	Location.	Area.	Remarks.
53. Marcella-Street Home . . . }	Roxbury District	6.98 acres.	{ In charge of Directors of Public Institutions.
99. Austin Farm . . .	West Roxbury District	50.00 "	" "
60. House of Correction and Lunatic Hospital. . . }	South Boston	14.52 "	" "
152. Alms House . . .	Alford Street, Charlestown . . .	2.39 "	" "
100. Small Pox Hospital . . . }	Canterbury St., West Roxbury . .	4.18 "	{ In charge of Board of Health.
79. Pumping Station . . .	Old Harbor Point, Dorchester . .	22.50 "	{ Main Drainage Works.
142. City Farm . . .	Somerville	10.20 "	

V.—*Miscellaneous Properties in Land held, except in a few cases noted, with no permanent purpose, and generally unimproved.*

Location.	Area.	Remarks.
CITY PROPER.		
23. Harrison Ave., corner Stoughton St.	10,597 sq. ft.	Subject to sale.
24. East Newton St., north side	16,120 "	" "
25. Stoughton St. to East Newton St.	2.09 acres.	" "
28. Albany St. Wharf, opposite Hospital	1.60 "	" "
26. Albany St. Wharf, opp. East Canton St.	26,024 sq. ft.	" "
27. Albany St., City Stables, etc.	7.37 acres.	{ Used by Health, Paving, Sewer, and Water Departments.
33. Chester Park and Springfield St.	1.29 "	In care of Trustees of City Hospital.
32. Northampton and Chester Park	2.98 "	In care of Superintendent of Commons.
4. Reservoir Lot, Beacon Hill	37,488 sq. ft.	Subject to sale.
18. Rutland St., west of Tremont St.	30,600 "	Reserved for a school-house.
ROXBURY DISTRICT.		
35. Old Small-Pox Hospital Lot, Swett St.	2.56 acres.	Subject to sale.
44. Fellows St., northwest side	25,288 sq. ft.	" "
45. Fellows St., southeast side	8,429 "	" "
54. Greenwood St., opp. Marcella-St. Home,	20,500 "	" "
38. Tremont and Heath Sts.	7.36 acres.	" "
51. Highland St., Stable Lot	1.84 "	{ Used by Paving and Health Departments.
55. Ledge Lot, Washington St.	3.09 "	Used by Paving Department.
SOUTH BOSTON.		
61. East First and L Sts.	27,000 sq. ft.	Subject to sale.
64. East Third and L Sts.	33,250 "	" "
62. East First and M Sts.	2.89 acres.	" "
63. East Second and N Sts.	1.45 "	" "
DORCHESTER DISTRICT.		
73. Boston St., near Upham's Corners	5,300 sq. ft.	Subject to sale.
74. Ledge Lot, Magnolia St.	1.86 acres.	Used by Paving Department.
76. Almshouse Lot, Downer Ave.	2.00 "	" " "
75. Downer Ave.	35,300 sq. ft.	" " "
82. Marsh west of Exchange St.	21,844 "	Used by Paving Department.
85. Gravel Lot, Forest Hills Ave.	1.10 acres.	
86. Codman St., east of railroad	9,800 sq. ft.	
87. Codman St., west of railroad	35,700 "	
88. Adams St., near Codman St.	1.02 acres.	
89. Ledge Lot, Codman St.	6.86 "	Used by Paving Department.
92. Marsh near Cedar Grove Cemetery	3.46 "	
81. Gibson School Fund Land, Dorchester Ave., Gibson and Park Sts.	10.26 "	Subject to sale.
WEST ROXBURY DISTRICT.		
95. Child St.	14,457 sq. ft.	Used by Paving Department.
98. Gravel Lot, Morton St.	14,520 "	" " "
108. Gravel Lot, Moreland St.	30,421 "	" " "
111. Muddy Pond	12.00 acres.	
112. Toll-House Lot, Grove St.	27,432 sq. ft.	Subject to sale.
BRIGHTON DISTRICT.		
124. City Ledge Lot, Cambridge St.	2.35 acres.	Subject to sale.
125. Old Gravel Lot, Cambridge St.	1.35 "	" "
127. Wilson's Hotel Lot, Washington St.	1.63 "	" "
131. Gravel Lot, Union St.	37,000 sq. ft.	Used by Paving Department.
132. Ledge Lot, Chestnut Hill Ave.	13.00 acres.	" " "
CHARLESTOWN DISTRICT.		
151. Alford St., opposite Almshouse	1.67 acres.	Subject to sale.
158. Rutherford Ave., southwest side	20,000 sq. ft.	" "
159. Rutherford Ave., northeast side	31,000 "	" "
EAST BOSTON DISTRICT.		
171. Gravel Lot, Marion, Paris, and Chelsea Streets	1.00 acre.	Used by Paving Department.

VI.—Public Property upon Islands in the Harbor.

Name.	Area.	Remarks.
180. Long Island	182.0 acres.	City of Boston owner.
175. Apple Island	9.5 "	" " "
186. Great Brewster's Island	16.0 "	" " "
177. Deer Island	134.0 "	" " "
182. Rainsford Island	11.0 "	" " "
183. Gallop's Island	16.0 "	" " "
181. Moon Island	37.5 "	" " "
178. Castle Island	21.6 "	United States owner.
176. Governor's Island	35.0 "	" " "
184. Loveil's Island	55.0 "	" " "
185. George's Island	28.0 "	" " "
179. Long Island Head	33.0 "	" " "

VII.—Properties of the United States on the Main Land, in part open and planted.

Name.	Location.	Area.
164. Navy Yard	Charlestown District	87.5 acres.
150. Hospital Grounds	Chelsea	90.0 acres (about).
135. Arsenal Grounds	Watertown	79.0 " "

The numbers prefixed to the names of localities in the preceding tables refer to their corresponding positions on the map accompanying these Notes.

SUMMARY.

Area under Class I:—

Within limits of City of Boston	1204.15 acres.
" " " " Somerville	28.50 "
" " " " Cambridge	15.41 "
" " " " Town of Brookline	9.10 "
Total	<u>1257.16 acres.</u>

Area under Class II:—

Within limits of City of Boston	520.12 acres.
" " " " Somerville	0.70 "
" " " " Cambridge	187.24 "
" " " " Town of Brookline	61.42 "
Total	<u>769.48 acres.</u>

Area under Class III:—

Boston Water Works	273.31 acres.
Brookline " "	4.86 "
Total	<u>278.17 acres.</u>

Area under Class IV:—

Boston	100.57 acres.
Somerville	10.20 "
Total	<u>110.77 acres.</u>

Area under Class V. (all within limits of Boston) . . . 105.95 acres.

Area under Class VI.:—

Owned by City of Boston	406.00 acres.
“ “ the United States	172.60 “
Total	578.60 acres.

Area under Class VII.:—

Within limits of City of Boston	87.50 acres.
Outside “ “ “	169.00 “
Total	256.50 acres.

The total area shown on the map, of all the classes, is 3356.63 acres. Of this, 659 acres are either outside the limits of, or are not owned by, the City of Boston.

Before taking up the question of the proposed large park, it may be desirable to form some idea of the present standard for the equipment of cities in respect to public grounds other than large parks, and consider how Boston's possessions, as they have been set out, may be rated by it. Of course this can be done but loosely, but the purpose may be carried far enough to answer with assurance the question, How are the people of Boston faring and likely to fare in this particular in comparison with civilized townspeople generally?

For this purpose it must be kept in mind that the public grounds of most cities have come to be what they are and where they are by various detached and desultory proceedings, of which the result, as a whole, illustrates penny-wise-pound-foolish wisdom quite as much as the result of laying out streets with reference to immediate local and personal interests, regardless of burdens loading up to be carried by an entire city ever after.

Of late, however, ideas of systematization, with a view to comprehensive and long-sighted public economy, have taken root, and in a few instances are growing to profitable results.

These ideas move in two directions; and as confusion between them can only lead to blunders, it is well to see where the parting occurs.

If a large town were about to be built on a previously determined plan, a series of public grounds might be contemplated, to be situated at regular distances apart, all of the same extent, and all looking to a similarity and an equality of provisions for the use of those who would resort to them, the aim being to distribute the value of whatever should be done for the purpose of public recreation, as nearly as possible equitably among the several corresponding districts of the city. A type of grounds would result, an inclination to approach which is here and there evident.

Certain advantages follow, but they are obtained at a cost that would be unreasonable in any city, the site of which was not generally flat, rockless, and treeless, or in any the natural growth, expansion on all sides and prosperity of which

were not singularly assured. Nor are the advantages aimed at in such a system, so far as attainable, of controlling importance.

As cities grow in a manner not to be accurately foreseen, as centres of business and centres of residence sometimes shift, and in the course of years become interchanged, and *as some parts of the site or the neighborhood of a city will nearly always be specially favorable to provisions of recreation of one class, other parts to provisions of another class*, it is generally better to have in view the development of some peculiar excellence in each of several grounds. And this may be considered the central idea of the alternative system, only that in proceeding with reference to it, it is to be remembered that cities are built compactly because of the economy of placing many varied facilities of exchange of service in close and direct intercommunication. Any large area within a city, not occupied by buildings, and not available as a means of communication between them, lessens this advantage, compelling circuitous routes to be taken and increasing the cost of the exchanges of service, upon the facilities offered for which the prosperity of the city depends.

It follows that so far as any purpose of public grounds can be well provided for on a small ground, it is better to so provide for it, rather than to multiply and complicate the purposes to be provided for on a larger ground. In a system determined with unqualified regard to this principle no ground would be used for any purpose of recreation which purpose could as well be served by itself elsewhere, on a small ground.

It follows, also, that the larger the ground needed for any special purpose, the more desirable it is (other things being equal) that that ground should be at a distance from the centres of exchange, which will be the denser parts of the city, and out of the main lines of the compact outward growth of the city.

The smaller grounds of the class designed for general use (being such as are commonly called squares and places) may with advantage, as far as practicable, be evenly distributed, with a view to local convenience, throughout a city. Yet, with regard to these, there are at least three circumstances which

should make numerous deviations from such equalizing distribution: First, topographical circumstances may compel spaces unsuitable for building to be left between streets, which it will be economical to use for such grounds; many such are found in and about Boston. Second, spaces should be left about public buildings, in order to give them better light, remove them from the noise of the streets, protect them from conflagrations, and make the value of their architecture available. Such spaces will economically become small public grounds.

Lastly, it is most desirable to make use of any local circumstance of the slightest dignity of character to supply a centre of interest for such grounds. Such a circumstance may be found, for instance, in a natural feature, as a notable rock, or in a historical feature, as the site of an old fort, or in the birth-place of a great man, or simply in a point of vantage for a view, as a prospect down the harbor. There is no better example of a very small public ground than one in Paris, where a beautiful church tower, decorated by centuries of superficial decay and mossy incrustations, has been taken as the centre of the work, the body of the church being removed and its place occupied by seats and gardenry.

Usually, however, there is nothing better for the purpose of this class of grounds than a simple open grove, or, on the smaller spaces, a group of forest trees (selected with regard for probable vigor and permanent health under the circumstances) with a walk through or around it, proper provisions against injury and unseemly use, a drinking fountain, and convenient seats out of the lines of passage, of which type there are good illustrations in Boston.

Playgrounds for children need not be so large as to interfere with direct, short communication, and should be evenly distributed in the residential part of the town, except as special localities are to be preferred on account of unusual topographical fitness.

If it is thought desirable to make any special provision for carriage and saddle exercise without going far from the central parts of the town, the most convenient and economical plan is

that of a passage having the character of a street of extraordinary width, strung with verdant features and other objects of interest, so laid out as not to seriously interfere with the primary business of the city; that is to say, with convenience of exchange. Such passages are found between the principal palaces and better-built parts and the more frequented parks in Paris, Berlin, Brussels, Dijon, and other European cities, and are there more commonly classed as boulevards; in America they are to be found notably in Buffalo and Chicago, and are there called parkways.

To further develop a system of public grounds, areas will be selected as far as practicable in parts of the city where they will least interrupt desirable general communication, the topographical conditions of each of which adapt it to a special purpose, and each of these will be fitted for public use upon a plan intended to make the most of its special advantages for its special purposes.

These observations may be considered to suggest the present standard of civilization in respect to the urban grounds of a city situated as Boston is. Looking with reference to this standard to Boston possessions and Boston's opportunities held in reserve to be used as her borders extend, hardly another city will be found in an equally satisfactory condition.

In the Boston provisions for urban public grounds there are:

(1) Two extensive parkway systems, one formed by Massachusetts Avenue, expanding into the broad, shady drives and walks that pass around and divide Chestnut Hill Reservoir; the other formed by the Muddy River (Riverdale) roads, spreading into the Promenade now forming about the Back Bay Drainage Basins, and with Commonwealth Avenue connecting the Common and Public Garden with Jamaica Pond, the Arboretum, and the site of Franklin Park.

(2) There are numerous local grounds so small in extent as not to interfere with desirable lines of street communication.

(3) There are a few grounds adapted to serve a similar purpose of a brief recreation for the people of their several neighborhoods, which are larger than the first, but so situated that

they will interrupt street communication only where natural obstacles occur (such as the deep slough of Back Bay).

(4) There is one ground which, though centrally situated, is fully large enough for the purpose, wherein the enjoyment of floral beauty and plant beauty of a specific character is liberally provided for.

(5) In another, much larger and of strikingly diversified surface, on the outskirts of the city, provision is made for the greatest possible variety of hardy trees in a manner to show their specific qualities, and to combine opportunity for scientific research and popular instruction with the enjoyment of the forms of individual sylvan beauty to be thus presented.

(6) In another, marine landscapes are offered and special provisions made for various aquatic recreations under particularly favorable natural conditions for their enjoyment.

(7) In another, a natural lake with beautifully wooded borders is to be availed of, which, besides its value in other respects, has this, that it will serve as a general skating-place and a safe still-water boating-place.

Looking for deficiencies in this system of non-rural grounds, the chief will be found to be the want of sufficient local and suitable general grounds for active exercises. It would be a good thing for the city to have a large, plain, flat, undecorated ground, not far away, easily accessible, if practicable, both by rail and boat, adapted to military and athletic exercises.

Considering the advantage which pertains to the subdivision of the city by bays and rivers, and the constant movement through and around it of strong tidal currents, and the advantages thus offered for boating and bathing, as well as for obtaining unstagnant air, it is believed that this exhibit of Boston's Breathing-Places will be found gratifying. Few cities have a larger number of small urban grounds proportionately to their population; and, while some of Boston's grounds are of a non-

descript character, serving no particular purpose very well, others are models of their class, and in no Northern city is the average usefulness of such grounds greater. As to reservations for the future, in respect to this class of grounds, no city is more forehanded.

Finally, it will be plain that with such advantages as Boston has been shown to have within reach for a great variety of purposes to be served upon public grounds, it would have been a wholly irrational thing for the city to have purchased five hundred acres more of land, all in one body, except for a purpose to which so large a space was more essential than it is to the purpose of making a place attractive and suitable for those needing air and exercise.

As to the idea that the main object of making a park beautiful is to make it attractive, argument is hardly needed by any one giving the slightest reflection to the question. Much more efficient means than can be found in any public ground could be easily and cheaply adopted for the purpose.

“Tell them, dear, that if eyes were made for seeing,
Then beauty is its own excuse for being.”

PART SECOND.

PART SECOND.

THE PLAN OF FRANKLIN PARK.

I.

OF CERTAIN CONDITIONS OF THE SITE OF FRANKLIN PARK.

THAT the site for Franklin Park could have been rationally bought only with a view to a purpose previously not all provided for, and that no use of the ground should now be permitted likely to lessen its value for this distinctive purpose, will yet more clearly appear if the topography of the ground and the manner of its selection are considered.

The scheme of Franklin Park, as it now stands, is a contraction of a much larger scheme outlined to the city government in 1869. This larger scheme included bodies of comparatively rich, humid, flat land, much better adapted to provide many forms of public ground than any within the field of the present scheme; a parade ground, for instance, and ball grounds; much better adapted, also, to the beauty to be obtained through refined horticulture, floral displays, and other decorations. It included streams of water and areas in which lakes with provisions for boating, skating, and bathing, as well as water-side beauty, could have been readily provided. All such ground has, long since, upon mature consideration by the city government, been thrown out of the scheme.

The ground finally selected has in its larger part the usual characteristics of the stony upland pasture, and the rocky

divides between streams commonly found in New England, covered by what are called "second growth" woods, the trees slow growing from the stumps of previous woods, crowded, somewhat stunted, spindling; not beautiful individually, but, in combination forming impressive masses of foliage. It not only contains no lake, permanent pool or stream of water, but it commands no distant water view. It includes no single natural feature of distinguished beauty or popular interest. It is in all parts underlaid by ledges which break out at some points in a bold and picturesque way, at others in such a manner only as to make barren patches, with scanty vegetation that wilts and becomes shabby in dry, hot weather. It is thickly strewn with boulders; even in parts where the surface appears smooth and clear, their presence just below it generally becomes obvious in dry weather, and they are turned out by the plough in great numbers. Any fine cultivation of the ground will be comparatively costly. It is not generally adaptable at moderate expense for lawn-like treatment, nor to the development of what are commonly, though perhaps not accurately, regarded as the beauties of landscape gardening. As a whole, it is rugged, intractable, and as little suitable to be worked to conditions harmonious with urban elegance as the site of the Back Bay Drainage Basins, Mount Royal Park at Montreal, East Rock Park at New Haven, or Arthur's Seat at Edinburgh.

It is on the borders of the city, remote from its more populous quarters, remote, also, from any of its excellent water highways, and out of the line of its leading land thoroughfares.

What can be said for the property as a whole is this: That there is not within or near the city any other equal extent of ground of as simple, and pleasingly simple, rural aspect. It has been at various points harshly gashed by rudely engineered roads, scarred by quarries and gravel-pits, and disruralized by artificially disposed trees and pseudo-rustic structures, but, considering its proximity to the compact town, it has remarkably escaped disturbances of this character.

II.

THE PURPOSE OF THE PLAN.

UNDER this head a distinction is to be made which is of critical importance. It is a distinction so rarely regarded in gardening works, or in engineering or architectural works nominally subsidiary to gardening works, that a strong prejudice of mental habit will be found to be working against a complete entertainment of it. It will be necessary, therefore, to set it forth painstakingly and to justify insistence upon it. An indolent indisposition to be bothered with it has added greatly to the taxes of several cities.

What is the special purpose of a large park in distinction from the various purposes that may be served by such smaller grounds as Boston is provided with?

In the first division of these pages reference has been made to the manner in which various evils of town life, by the introduction of one special expedient after another, have been gradually so well contended with, that in cities that at present have several times the population they had in the last century, much less time is now lost than then to productive industry; the average length of life much advanced, and the value of life augmented. The evils in question have been for the most part intangible, and to those who were not close students of them have been considered inscrutable; not to be measured and reckoned up like the evils of fire and flood, famine, war, and lawlessness. Consequently plans for overcoming them have always been regarded for a time as fanciful, and those urging them as theorists and enthusiasts. For a time, no city outlays have been so grudgingly made or given so much dissatisfaction to taxpayers as those required to advance measures of this class. Looking back upon their results, after a few years, it is admitted that no other money has been so profitably expended. No one thinks that they were untimely or were advanced too rapidly.

Of this class of evils there is one rapidly growing in Boston, in contention with which nothing has yet been accomplished. It is an evil dependent on a condition involved in the purpose of placing many stacks of artificial conveniences for the interchange of services closely together. It may be suggested if not explained (for evils of this class are seldom fully explainable) in this way.

A man's eyes cannot be as much occupied as they are in large cities by artificial things, or by natural things seen under obviously artificial conditions, without a harmful effect, first on his mental and nervous system and ultimately on his entire constitutional organization.

That relief from this evil is to be obtained through recreation is often said, without sufficient discrimination as to the nature of the recreation required. The several varieties of recreation to be obtained in churches, newspapers, theatres, picture galleries, billiard rooms, base ball grounds, trotting courses, and flower gardens, may each serve to supply a mitigating influence. An influence is desirable, however, that, acting through the eye, shall be more than mitigative, that shall be antithetical, reversive, and antidotal. Such an influence is found in what, in notes to follow, will be called the enjoyment of pleasing rural scenery.

But to understand what will be meant by this term as here to be used, two ideas must not be allowed to run together, that few minds are trained to keep apart. To separate them let it be reflected, first, that the word beauty is commonly used with respect to two quite distinct aspects of the things that enter visibly into the composition of parks and gardens. A little violet or a great magnolia blossom, the frond of a fern, a carpet of fine turf of the form and size of a prayer rug, a block of carved and polished marble, a vase or a jet of water,—in the beauty of all these things unalloyed pleasure may be taken in the heart of a city. And pleasure in their beauty may be enhanced by aggregations and combinations of them, as it is in

arrangement of bouquets and head-dresses, the decoration of the dinner-tables, window-sills and dooryards, or, in a more complex and largely effective way, in such elaborate exhibitions of high horticultural art as the city maintains in the Public Garden.

But there is a pleasure-bringing beauty in the same class of objects—foliage, flowers, verdure, rocks, and water—not to be enjoyed under the same circumstances or under similar combinations; a beauty which appeals to *a different class of human sensibilities*, a beauty the art of securing which is hardly more akin with the art of securing beauty on a dinner-table, a window-sill, a dooryard, or an urban garden, than the work of the sculptor is akin with the work of the painter.

Let beauty of the first kind be called here urban beauty, not because it cannot be had elsewhere than in a city, but because the distinction may thus, for the sake of argument in this particular case, be kept in mind between it and that beauty of the same things which can only be had clear of the confinement of a city, and which it is convenient therefore to refer to as the beauty of rural scenery.

Now as to this term scenery, it is to be borne in mind that we do not speak of what may be observed in the flower and foliage decorations of a dinner-table, window-sill, or dooryard, scarcely of what may be seen in even a large urban garden, as scenery. Scenery is more than an object or a series of objects; more than a spectacle, more than a scene or a series of scenes, more than a landscape, and other than a series of landscapes. Moreover, there may be beautiful scenery in which not a beautiful blossom or leaf or rock, bush or tree, not a gleam of water or of turf shall be visible. But there is no beautiful scenery that does not give the mind an emotional impulse different from that resulting from whatever beauty may be found in a room, courtyard, or garden, within which vision is obviously confined by walls or other surrounding artificial constructions.

It is necessary to be thus and even more particular in defining the term used to denote the paramount purpose

embodied in the plan of Franklin Park, because many men, having a keen enjoyment of certain forms of beauty in vegetation, and even of things found only in the country, habitually class much as rural that is not only not rural, but is even the reverse of rural as that term is to be here used.

For example: in a region of undulating surface with a meandering stream and winding valleys, with much naturally disposed wood, there is a house with outbuildings and enclosures, roads, walks, trees, bushes, and flowering plants. If the constructions are of the natural materials of the locality and not fashioned expressly to manifest the wealth or art of the builders, if they are of the texture and the grain and the hues that such materials will naturally become if no effort to hide or disguise them is made, if the lines of the roads and walks are adapted to curves of the natural surface, and if the trees and plants are of a natural character naturally disposed, the result will be congruous with the general natural rural scenery of the locality, its rural quality being, perhaps, enhanced by these unobtrusive artificial elements. But in such a situation it oftener than otherwise occurs that customs will be followed which had their origin in a desire to obtain results that should be pleasing, not through congruity with pleasing natural rural circumstances, but through incongruity with them. Why? Simply because those designing them had been oppressed by a monotony of rural scenery, and desired to find relief from it, and because also they desired to manifest the triumph of civilized forces over nature. And on account of the general association with rural scenery of things determined by fashions originating in these desires, they are carelessly thought of as rural things, and the pleasure to be derived from them is esteemed a part of the pleasure taken in rural scenery.

It thus happens that things come to be regarded as elements of rural scenery which are simply cheap and fragmentary efforts to realize something of the pleasingness which the countryman finds in the artificialness of the city. This is why, to cite a few examples familiar to every one, wooden houses

are fashioned in forms and with decorations copied from houses of masonry, and why the wood of them is not left of its natural color, or given a tint harmonious with natural objects, but for distinction's sake smeared over with glistening white lead. This is the reason why trees are transplanted from natural to unnatural situations about houses so treated, why they are formally disposed, why forms are preferred for them to be obtained only by artificial processes, as grafting, pruning, and shearing; why shrubs are worked into fantastic shapes that cannot possibly be mistaken for natural growths; why groups are made studiously formal, why the trunks of trees are sometimes whitewashed; why rocks too heavy to be put out of sight are cleared of their natural beauty, and even sometimes also whitewashed; why flowering plants are often arranged as artificially as the stones of a mosaic pavement; why pools are furnished with clean and rigid stone margins and jets of water thrown from them; why specimens of rustic work and of rock work are displayed conspicuously that have been plainly designed to signalize, not to subordinate or soften, the artificialness of artificial conveniences.

Defining the purpose of the plan of Franklin Park to be that of placing within the easy reach of the people of the city the enjoyment of such a measure as is practicable of rural scenery, all such misunderstanding of the term as has thus been explained must be guarded against.

That rural scenery has the effect alleged, of counteracting a certain oppression of town life, is too well established to need argument, but as the manner of its action will have a practical bearing on the purpose of the plan, the circumstance may be recalled that the evil to be met is most apt to appear in excessive nervous tension, over-anxiety, hasty disposition, impatience, irritability, and that the grateful effect of a contemplation of pleasing rural scenery is proverbially regarded as the reverse of this. It is, for example, of the enjoyment of this pleasure, and not simply of air and exercise, that Emerson says, "It soothes and sympathizes," that Lowell says, "It pours

oil and wine on the smarts of the mind," and which Ruskin describes as "absolute peace."

It is not an easy matter, in the immediate outskirts of a great city, to make a provision of scenery which shall be so far rural in character and pleasing in effect as to have a high degree of the influence desired.

Some wise men are accustomed to ridicule the earlier result of efforts to that end by comparing it with scenery remote from cities the rurality of which owes nothing to human care. But these higher examples not being available for the frequent use of the mass of the people of a city, it is only a question whether a result is to be gained under such conditions as are offered in the site of Franklin Park which shall be of so much value in this respect that it will be worth more than it will cost. And, in considering this question, it is to be borne in mind that the purpose requires no elements of scenery of a class that would induce sensational effects. It will be answered in a measure — it is a question whether it may not even be better answered — by scenery that may be comparatively characterized as tame and homely. It is almost certainly better that the aim in overcoming the difficulties of securing such scenery should be modest, provided a modest aim can be sustained, and the temptation to put it out of countenance by bits of irrelevant finery resisted.

Given sufficient space, scenery of much simpler elements than are found in the site of Franklin Park may possess the soothing charm which lies in the qualities of breadth, distance, depth, intricacy, atmospheric perspective, and mystery. It may have picturesque passages (that is to say, more than picturesque objects or picturesque "bits"). It may have passages, indeed, of an aspect approaching grandeur and sublimity.

It is to be feared that there are some who may be inclined to question if a considerable degree of refined culture, such as is common only to the more worldly fortunate, is not necessary to enable one to enjoy the charm of rural scenery sympathetically

with Wordsworth, Emerson, Ruskin, and Lowell. To enjoy it intellectually, yes; to be affected by it, made healthier, better, happier by it, no. The men who have done the most to draw the world to the poetic enjoyment of nature have, in large part, come from lowly homes, and been educated in inexpensive schools. Burns, the ploughboy, was one such, known to all. Millet, whose works are honored in the stateliest houses, was a peasant in habit, manner, and associations all his life long. Léon Bonvin, whose pathetic love of the most modest natural scenery was illustrated in Harper's Magazine of last December, was by vocation the bar-keeper of a wayside tavern. And in thinking of this question, especially with reference to a majority of the people of Boston, it is well to remember a phrase used by Dr. Shairp in his treatise on the Poetic Interpretation of Nature. Speaking of Wordsworth and his sister, he says that the woman was the greater poet of the two, "only not a literary poet." Poetic sensibility is one thing; inclination and capacity to give coherent form to poetic sentiment another.

The following is an account by Mrs. Gaskell of the poorer sort of the humblest work-people of Manchester, England, and is drawn from life, as any one chancing to be in that town on a fine summer holiday may test. Abating something from the grandeur of the trees, similar scenes have been witnessed during the past summer in the new Brooklyn, Buffalo, and Philadelphia parks, and in the yet hardly begun Beardsley Park of Bridgeport. It is a question of time and of a wholesomely restrained ambition when they shall be seen in Franklin Park.

"He was on the verge of a green area, shut in by magnificent trees in all the glory of their early foliage, before the summer heat had deepened their verdure into one rich monotonous tint. And hither came party after party—old men and maidens, young men and children. Whole families trooped along after the guiding fathers, who bore the youngest in their arms or astride upon their backs, while they turned round occasionally to the wives, with whom they shared some fond local remembrance. For years has Dunham Park been the favorite resort of the Manchester work-people. Its scenery presents such a

complete contrast to the whirl and turmoil of Manchester. . . . Depend upon it, this sylvan repose, this *accessible quiet*, this lapping the soul in green images of the country, forms the most complete contrast to a town's person, and consequently has over such the greatest power of charm. . . . Far away in the distance, now sinking, now falling, now swelling and clear came a ringing peal of children's voices, blended together in one of those psalm tunes which we are all of us familiar with, and which bring to mind the old, old days when we, as wondering children, were first led to worship 'Our Father' by those beloved ones who have since gone to the more perfect worship.

"Holy was that distant choral praise, even to the most thoughtless; and when it, in fact, was ended, in the instant's pause during which the ear awaits the repetition of the air, they caught the noontide hum and buzz of the myriads of insects who danced away their lives in the glorious day; they heard the swaying of the mighty woods in the soft but resistless breeze, and then again once more burst forth the merry jests and the shouts of childhood, and again the elder ones resumed their happy talk as they lay or sat 'under the greenwood tree.'

"But the day drew to an end; the heat declined, the birds once more began their warblings, the fresh scents hung about plant and tree and grass, betokening the fragrant presence of the reviving dew. . . . As they trod the meadow path once more, they were joined by many a party they had encountered during the day, all abounding in happiness, all full of the day's adventures.

"Long cherished quarrels had been forgotten, new friendships formed. Fresh tastes and higher delights had been imparted that day. We have all of us our look now and then, called up by some noble or loving thought (our highest on earth) which will be our likeness in heaven. I can catch the glance on many a face, the glancing light of the cloud of glory from heaven, which is our home. That look was present on many a hard-worked, wrinkled countenance as they turned backwards to catch a longing, lingering look at Dunham Woods, fast deepening into blackness of night, but whose memory was to haunt in greenness and freshness many a loom and workshop and factory with images of peace and beauty."

III.

A REVIEW OF THE PLAN BY DIVISIONS.

As to Local Names to be used in the following Review.—For convenience of reference, names have been given on the drawing to various localities. Some of these have been found in use, as ABBOTSWOOD, GLEN ROAD, and ROCK HILL. In most of the others, old homestead names of the neighborhood are recalled, a choice from among them having been made of such as would couple not too roughly with appropriate terminals. SCARBORO HILL, HAGBORNE HILL, WAITWOOD, ROCK MORTON, and ELICOTTDALE are examples. Some of this class were suggested by the late Francis D. Drake, author of a History of Roxbury, shortly before his lamented death; others have been obtained from Colonial records of the park property, found at the Registrar's office of Norfolk County. NAZINGDALE is from the birthplace of the first settlers. LONG CROUCH was the Colonial name of the road now known as Seaver Street, adjoining the woods to which it is given in the drawing. OLD TRAIL ROAD is nearly on the line of the Indian footpath used in the earlier communications between Boston and Plymouth. The name RESTING PLACE marks a shady knoll upon which the first military company formed in the Colonies with the purpose of armed resistance to British authority rested on its march home after the fight at Lexington. The captain and lieutenant of the company were both of families that at one time had homes on the park lands, and from them the names HEATHFIELD and PIERREPONT ROAD are taken.

The region named THE WILDERNESS is referred to in records of the early part of the last century as "the Rocky Wilderness Land." PLAYSTEAD is an old designation of a rural playground, STEADING of the offices of a rural estate. GREETING refers to the purpose of a promenade. COUNTRY PARK is a term used to mark the intended distinction of character between Franklin Park and other public grounds of the city in a report made by Alderman, now Mayor, O'Brien in 1877. SCHOOLMASTER HILL is so named in allusion to the circumstance that William Emerson and his brother, Ralph Waldo, while keeping school in Roxbury, lived in a house on the east

side of this hill. Private letters of Emerson are preserved in which he refers fondly to the wildness and rurality of the neighborhood.

As to the map.—The broad sheet that has been spoken of in the Introduction can be folded and carried in the pocket, and it is intended that copies of it shall be exhibited at different favorable points on the park site, with indices to the position on the ground of the more salient features of the plan. The drawing will best meet the intention with which it is prepared if it is examined on the ground with some exercise of the imagination, being considered as a map of what may be expected should the plan be carried out, the usual limitations of a map being had in mind.

In the review of the plan by divisions presently to be made, the verbal observations upon the broad sheet will be repeated, but in a slightly extended form, with a statement of some additional particulars, and with special reference to readers intending to look over the ground as just suggested.

The “limitations of a map” advised to be had in mind will be understood if it is reflected that a map of Boston would give a stranger but little idea of what he would see if he were walking the streets of the city; still less of that more important part that exists under its roofs.

Seen from above, the trees of even a half-grown park would hide the outlines of the principal part of its roads, walks, and other surface constructions. Hence in a map designed to exhibit the general plan of a park, the woods, which will be the most important element of its scenery, can be but vaguely and incompletely represented; and bushes beneath trees, not at all.

Again, if it were attempted to show by the ordinary method of map-makers those variations of the surface which, next to the woods, are the most important features of the design, the drawing would be too complicated to fairly exhibit the plan of the work to be done. To avoid the obscurity which would thus occur, figures are given on the drawing, by which the relative elevation of the ground at various points may be determined. The more important swellings and depressions are also indicated by names ending in “hill” or “dale.”

If the drawing is taken on the ground where the existing hills and valleys can be seen, and if these and the principal existing masses of foliage are regarded as fixed features, the

observer may with little personal trouble readily form a good general idea of what is projected. The conventional signs for foliage show, according as they are closely clustered, scattered, or wanting, the intended division into wooded, semi-wooded, and open turf-land; the positions of the principal outcrops of rock are indicated; the various routes for opening the scenery of the park to exhibition, in carriage, saddle, horse, and foot travel, are conspicuously lined out, and sites for the few structures necessary to public convenience are plainly shown.

It is to be considered in observing the position of these structures on the ground, that they are designed, as are all the artificial objects of the park, to be kept as low as will be consistent with their several purposes of utility, that their walls are to be of the stones of the locality, with weather stained and lichen mottled faces, and that they are to be so set in among rocks and foliage that, with a single not very marked exception, they will be seen only on near approach by those wishing to use them, and not at all by visitors following the walks, drives, and rides of the main circuit. The bolder ledges, on the other hand, will be rather more open to view than they now are. The woods, again, as they generally occupy the more elevated ground, will be relatively more prominent than they appear in the drawing.

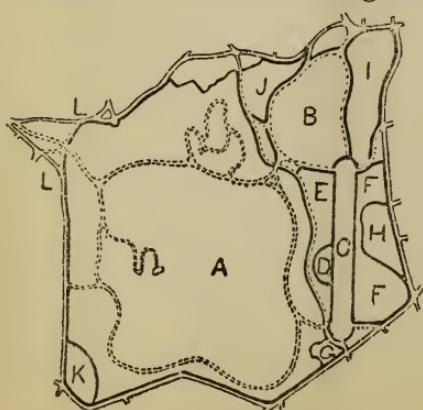
It has been considered necessary to public convenience that the park should be divided by a road crossing it from Blue Hill Avenue to Forest Hill Street, and that this should be open night and day for all ordinary street uses as the park roads will not be. Also that a considerable space of ground should be open for pleasure use after daylight; that this space should be lightable in such a manner that no part of it will be in dark shadow, and to this end that it should be free from underwood, low-headed trees or other conditions offering facilities for concealment. (To keep all of the park open at night, making it a safe and decorous place of resort, would greatly augment its running expenses without securing an adequate return.)

The only favorable line for the cross-road is one corresponding nearly with the present Glen Road. (The following diagram represents the outline of the park property. Glen Road passes from A to B.) Such a road will divide the park

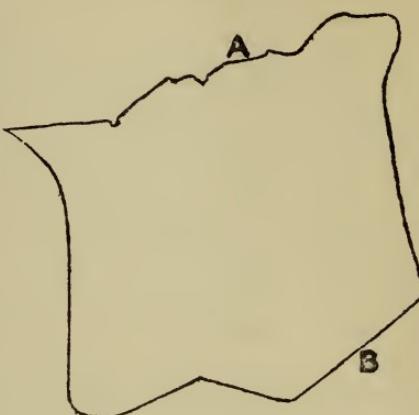
into two parts, as Charles Street divides the Common from the Public Garden. The division on the side furthest from the compact part of the city will contain two-thirds of the ground, and this being enclosed by itself may be considered as the main park.

The ground on the other side is designed to answer purposes relatively to the main park analogous to those of a fore-court, portico, and reception room, with minor apartments opening from them for various special uses, and to which it is desirable access should be had at all times without entering the main park. It may be called the ante-park. From the ante-park there are to be two general entrances to the main park and an additional entrance for foot visitors.

For convenience in explaining the plan, the park must be considered as further subdivided as indicated by the black lines of the diagram below, but it must not be imagined that these lines will be obvious in looking over the ground. They are in part imaginary, and where not so will have the effect of barring the view or creating disunity of scenery less than an ordinary country road would do. Corresponding to letters on the diagram, names will be used to designate the several divisions as follows :



- A The Country Park.*
- B The Playstead.*
- C The Greeting.*
- D The Music Court.*
- E The Little Folks' Fair.*
- F The Deer Park.*
- G Refectory Hill.*
- H Sargent's Field.*
- I Long Crouch Woods.*
- J The Steading.*
- K The Nursery.*



The distinctive purpose to which each of these divisions is to be fitted will now be stated, the more comprehensive landscape design which includes them all being afterwards described.

A. *The Country Park* (before referred to as the main park) is designed to be prepared and taken care of exclusively with reference to the enjoyment of rural scenery, that is to say, if it is to be used for any other purpose, it is meant that its advantages for that other purpose shall have accrued at no appreciable sacrifice of advantages for this primary and dominating purpose.

The division will be a mile long and three quarters of a mile wide. Natural scenery of much value for the purpose in view cannot be permanently secured in a tract of land of diversified surface of these limits with a great city growing about it, if the essential elements of such scenery are to be divided, adulterated, or put out of countenance by artificial objects, at all more than is necessary to its protection and to the reasonable convenience of those seeking the special benefits offered. The plan proposes, therefore, that in the Country Park nothing shall be built, nothing set up, nothing planted, as a decorative feature; nothing for the gratification of curiosity, nothing for the advancement or popularization of science. These objects are provided for suitably in the Public Garden, the Arboretum, and other grounds of the city. No other city in America has as good arrangements for them.

To sustain the designed character of the Country Park, the urban elegance generally desired in a small public or private pleasure ground is to be methodically guarded against. Turf, for example, is to be in most parts preferred as kept short by sheep, rather than by lawn mowers; well known and long tried trees and bushes to rare ones; natives to exotics; humble field flowers to high-bred marvels; plain green leaves to the blotched, spotted and fretted leaves, for which, in decorative gardening, there is now a passing fashion. Above all, cheap, tawdry, cockneyfied garden toys, such as are sometimes placed in parks incongruously with all their rural character, are to be eschewed.

But a poor, shabby, worn, patchy, or in any way untidy rurality is equally to be avoided with fragments of urban and suburban finery. In this respect the park is designed to be an example of thoroughly nice, though modest and somewhat homespun housekeeping.

The site of the Country Park is in most parts rugged, everywhere undulating. Where there are no outcropping ledges, solid rock is often close under the surface, and where it is not, there is in many places almost a pavement of boulders. Compared with that of most public parks, the surface soil is poor, while the subsoil is stony and hard. For these reasons, when the natural surface is much trampled and worn it becomes an inert dust, pernicious to vegetation. It cannot, therefore, be prepared to resist the wear of athletic sports without undue expense.

Under wise regulations and with considerate customs of use, for the establishment of which the good will of the people must be engaged, the site of the Country Park will be found happily adapted to its special distinctive purpose. But it can be wisely used for no recreations which would tend to the destruction of its verdant elements; for none not of the class of those in which women and children may not and do not customarily take part. The plan looks to its being maintained in quietness; quietness both to the eye and the ear. A grateful serenity may be enjoyed in it by many thousand people at a time, if they are not drawn into throngs by spectacular attractions, but allowed to distribute themselves as they are otherwise likely to do.

As will soon be shown, the intention of the plan of the park, as a whole, is that from no part of this Country Park division of it shall anything in any other of its divisions be visible, or, at most, be noticeable, except rock, turf, and trees, and these only in harmonious composition with the natural scenery of the Country Park. A large part of the Country Park is to be wooded, and adapted to the use of picnic and basket parties, especially small family parties. Various conveniences for these are to be prepared. Tennis courts, croquet

grounds, archery ranges, and small lawns for children's festivities, are provided for in connection with suitable picnic grounds in the several districts which are named on the Commissioners' map — *The Wilderness, Juniper Hill, Waitwood, Heathfield, Rock Milton, Rock Morton*; on the western slopes of *Scarboro Hill* and in *Abbotswood*.

Near the picturesque declivity and hanging wood of Schoolmaster's Hill, several small level places are designed to be formed by rough terracing on the hillside. Each of these is to be covered by vines on trellises, and furnished with tables and seats. Most of the arbors so formed look, at considerable elevation and advantageously, upon the broadest and quietest purely pastoral scene that the park can offer. These arbors are intended especially for the use of family basket parties. A small house is placed among them, to contain an office for the superintendence of the district, a parcel room and closets, and at which hot water for making tea can be had without charge. The house is to be placed and the other conveniences are to be so sheltered by existing trees and vines to be grown upon the trellises that they will be invisible except to those seeking them.

At a point central to all the picnic and basket party grounds that have been named, Abbotswood excepted, the map shows a space of unbroken turf, about eight acres in extent, named Ellicottdale, with a winding margin, which is generally rocky and shady. This ground is now for the most part boggy, and its surface strewn with boulders. The design is to convert it into a meadow adapted to be used (in the manner of the Long Meadow of the Brooklyn Park) for lawn games, such as tennis and croquet. On the north side of it another small house is provided, at which parties wishing to play will obtain assignments of ground, and can leave outer garments and store or hire needed implements. The position of this house is in a recess of the margin, near a great knuckle of rock and a large oak tree on the east side.*

* In Brooklyn nearly every religious organization of the city, Catholic and Protestant, has an annual picnic in the Park. During the last year permits

The district last described and the circumjacent picnic groves may be approached by a walk coming from William Street. The entrance at this point is arranged with a view to a terminus and turning place of a street railroad; and to avoid compelling women and children to pass through a throng of carriages, the walk from it to Ellicottdale passes the circuit drive of the Park by a subway.

South of the Meadow last described a walk and a narrow branch of the main drive will be seen on the map winding up the steep and rocky woodside of Scarboro Hill to a resting-place upon the summit, where a temporary shelter for visitors now stands. Half-way up the hill, where a level shelf may be found under a steep ledge, buildings are shown marked "DAIRY." The Refectory, on the opposite side of the Park, being intended to supply more substantial refreshments, and to accommodate considerable numbers, the Dairy is designed, first, to provide the necessities of picnic parties in this part of the Park; second, to supply to all a few simple refreshments, such as are to be recommended for children and invalids, more especially fresh dairy products of the best quality. Cows are to be kept in an apartment separated from the main room by a

were given to seven hundred and fifty parties to occupy ground for the purpose. Of these parties, three hundred numbered above one hundred and fifty persons each, and one twenty-five hundred persons. On the 24th of May last, twelve thousand children paraded on the Meadow under the observation of forty thousand spectators. Seven hundred small parties of children applied for and obtained the use of swings under special superintendence. The Commissioners in their Annual Report say that the custom of taking children to a distance for picnics has been generally given up in Brooklyn, the use of the Park being found more convenient, cheaper, and safer. The Park keepers, during the last year, returned to their parents fifty little children who had strayed away while playing in the Park. Permits were given to more than four hundred lawn tennis clubs, with an average membership of ten persons each, half of whom were young women, to occupy courts on the Park, and to many others for archery and croquet. These items show to some extent what an excellent, popular, innocent, and wholesome use is made of the Park during the hot months.

glass partition, as in the famous exquisite dairies of Holland and Belgium; and those who desire it are to be furnished with milk warm from the cow, as in St. James's Park, London. Fowls are also to be kept and new-laid eggs supplied. Immediately east of the grove in which this house will stand lies the principal expanse of turf of the Country Park. This is intended to be cropped with sheep, and a court with sheds south of the dairy and connecting with its cow-house is for the folding of the flock at night. The district of which this establishment is the centre slopes toward the prevailing summer breeze; is sheltered on the north; is already agreeably wooded, and will be a place at which invalids and mothers with little children may be advised to pass the best part of the day.

B. *The Playstead.* This is a field of turf, thirty acres in extent (the most nearly flat ground on the property, little broken by rock), designed to be used for the athletic recreation and education of the city's schoolboys, for occasional civic ceremonies and exhibitions, and for any purpose likely to draw spectators in crowds. The ground about Ellicottdale not being adapted to accommodate many spectators, for example, and a crowd being undesirable at any point in the Country Park, if a parade of school children, such as occurs in the Brooklyn Park every year, were to be made, this would be the place for it. "The Overlook," on its left, is an elevated platform for spectators. It is eight hundred feet long, covering a barren ledge which would otherwise be disagreeably prominent. It is built of boulders obtained in clearing the Playstead, which are to be mainly overgrown with vegetation befitting the form and material of the structure, adapted to harmonize it with the natural scenery, and make it unobtrusive. The Overlook will be in the shade of existing trees during the afternoon, and spectators will look away from the sun. Among these trees, in a depression of the rocks, a rectangular block appears on the map. This stands for a structure which will supply a platform, to be covered by a roof, to serve as a retreat for visitors during summer showers, and in the basement a station for park keepers, with a lock-up, a woman's retiring-room, a coat-room, lavatory for players, and

closets. An arched passage through the wall of the Overlook gives admission to it from the Playstead.

C. *The Greeting.* This division is to be wholly occupied by a series of parallel and contiguous drives, rides and walks, a double length of each, under rows of trees forming a Promenade, or Meeting Ground, of the Alameda type, half a mile in length. Monumental, architectural, and various decorative adjuncts are here admissible, but not essential. There are suitable positions for statues, water-jets, "baskets" of flowers, bird-cages, etc. The Playstead and the Greeting are to be without underwood, and adapted with electric lighting for night as well as day use. Together they will form an unenclosed ground, reaching across the Park, nearly a mile in length.

D. *The Music Court.* A sylvan amphitheatre adapted to concerts.

E. *The Little Folks' Fair.* A division for childish entertainments, to be furnished with Swings, Scups, See-saws, Sand Courts, Flying Horses, Toy Booths, Marionettes, Goat Carriages, Donkey Courses, Bear Pits, and other amusing exercises and exhibitions, mostly to be provided by lessees and purveyors, to be licensed for the purpose.

F. *The Deer Park.* This will supply a range for a small herd to be seen from the Greeting. Most of the ground, owing to the thinness of the soil over a flattish ledge, cannot be adapted to occupation by the public, or to be planted, except at excessive expense.

G. *Refectory Hill.* A place for refreshments, to be principally served from the house shown, out of doors, under a large pergola, or vine-clad trellis, upon a terrace formed in the manner of the Playstead Overlook. From this terrace extensive sylvan prospects open, one of which will be later referred to. In the rear of the Refectory building, across a carriage-court, there is a circular range of horse-sheds for the use of visitors.

H. *Sargent's Field.* This ground being comparatively free from rock, and to be easily brought to a nearly level surface of good turf, tennis courts and a small ball ground may be pro-

vided in it; the object being to save players coming from the east from walking further to reach a playing ground, and to provide a place for players in general to go to, when on holidays the Playstead shall be reserved for other uses. Until found to be needed, it may with advantage be made a part of the Deer Park.

I. *Long Crouch Woods.* A rambling ground, with sheltered southwestern slopes, to be held subject to lease to a suitable organization for a Zoölogical Garden.

J. *The Steading.* A rocky, sterile knoll, reserved for the Commissioners' offices, within a screen of woods.

K. *The Nursery.* Depressed ground, to be used, when adequate drainage outlets for this part of the city shall have been provided, for a service garden.

Border Ground. The streets by which the property taken for the park is bounded, are generally laid down on this plan as if moderately enlarged from the present thoroughfares (which at various points are but narrow lanes) and with a sidewalk on the park side, at such varying distances from the wheelway as may be necessary to avoid, in forming them, the destruction of fine trees and the cost of excessive grading. This arrangement is made practicable by setting back park fences and other obstructions fifty to eighty feet from the wheelways. In this way, also, a much larger widening of the wheelways than is suggested by the drawing can be made whenever public convenience will be served by it, without inordinate cost. In a few cases, for short distances, streets are shown as they may be improved by a slight taking of private land. This is to avoid heavy outlay for grading and the destruction of fine natural features on the park side of the present roads—as where, for example, rocky eminences of the park have their bases in the street. It is suggested that Canterbury Street should be widened ten feet opposite the park in order to avoid injury to the fine trees now growing in the park close to the street.

It is suggested on the drawing, also, that at the Williams Street entrance to the park the course of Forest Hills Street should be made more direct, and the grade improved by throwing it

entirely into the park; and that some other variations from the present arrangements should be effected with a view to greater public convenience. To avoid interruption of pleasure travel by funeral processions, and to improve passage around the park, a short cross-road is planned opposite Forest Hills Cemetery, passing the park drive by a subway (LL in the index map). A short new street in extension of Sigourney Street is suggested to facilitate passage around the park. A small piece of land is proposed to be taken into the park at the corner of Sigourney Street to avoid awkward complications. The land proposed to be thrown out of the park property for all these purposes of street improvement is much larger than that to be taken in.

A direct approach to the park from Boylston Station of the Providence Railroad, is suggested by an extension of the present Boylston Street to the Playstead entrance. By this route a thousand men could, in half an hour, be transferred in a body from the Common to the Playstead.

IV.

A REVIEW OF THE GENERAL LANDSCAPE DESIGN.

SUITABLE provision has not commonly been made in the first laying out of a large city park for the puposes of the Greeting and the Music Court. Wherever it has not, ground that could only be poorly adapted to these purposes, and this at heavy cost, has generally come, in after years, to be used for them. It is best to avoid this danger. The best arrangements will be of a formal character, and these can be best provided on the site of Franklin Park, in the locality indicated, near the east corner. This not only has topographical advantages for the ends in view, but it is at such a distance from, and stands so related to, the Country Park, that great throngs upon it will in no wise disturb the desired serenity of the latter. The formal arrangement of trees within this division, and the small structures that will be required in the adjoining Little Folks'

Fair Ground, will not be observable except upon close approach, the rows of trees being so flanked by the outer, naturally disposed trees that, seen at a short distance in connection with the latter, they will have the effect of a forest growth.

Setting aside these two features, which stand to the rest of the park somewhat in the relation of the dwelling-house to a private park, except that care is taken to place them in landscape obscurity, the landscape design may be understood by considering that the intention is to make no change in any of the present leading features of the ground except with the purpose of giving a fuller development, aggrandizement, and emphasis to what are regarded as the more interesting and effective existing elements of their scenery, and of taking out or subordinating elements that neutralize or conflict with those chosen to be made more of. This first, and second, the sequestration, as far as possible, of the scenery of the park so that the outer scenery, to be formed by the gradual growing of the city about it, and which will necessarily be conflicting in expression, sentiment, and association with it, may be kept out of sight.

The latter purpose accounts more particularly for the woods which, it will be seen, are intended to be formed where no woods now are, along the borders of the Country Park; and the further to promote seclusion, these and other border trees are to be imagined as furnished with underwood.

The woods of the Wilderness, after having been much thinned and trimmed with a view to the growth of the best of them in sturdier and more umbrageous forms, and to some degree of grouping and more harmonious companionship, are also to be interspersed with scattered, irregular thickets of low, sturdy bushes, not only for picturesqueness, but to keep the ground, in the more arid parts, better shaded and moister, hide its barrenness, check rushing movements of visitors, and prevent the trampling of the drier ground to dust.

Trees in the Greeting and Playstead are to be all of large growth, and high stemmed (like those now growing spontane-

ously upon the Playstead), leaving room for light and vision to range under their branches.

The slope west of Glen Lane where, near the entrance to the Country Park, drives, rides, and walks come together, is designed to be closely planted with low bushes (shown on the Commissioners' map, but not on the reduced reproductions), the object being to obscure the artificial features without making a screen between the natural features of the Playstead and Nazingdale. Looking in this direction from nearly all of the Playstead quarter there will be an open prospect extending to the Blue Hills of Milton, five miles away, the first mile within the park. The proposed plantation along the line of Canterbury Street will hide ordinary buildings that may hereafter be erected between the Park and the Blue Hills, leaving this permanently a broad, extended, purely rural prospect. The outlook westwardly from the hillside ending at the Refectory terrace will also extend permanently to a distant wooded horizon formed in part by the tree tops of Forest Hills Cemetery and in part by those of the Arboretum, two miles away, both these properties, though out of the Park, being preserved from building by legal enactments, and the objects to which they are devoted requiring that they should be always overgrown with trees.

The centre lines of the two broad fields of extended vision that have been pointed out, cross nearly at right angles, the point of their crossing being where the Ellicott and Nazingdales run together, nearly midway between the two hanging woods of Schoolmaster Hill and Abbotswood crags. This locality, being at the centre of the property, may be considered the pivot of the general landscape design. Looking in the general direction of the lines that have been defined as crossing it from either of four quarters of the Park, a moderately broad, open view will be had between simple bodies of forest, the foliage growing upon ground higher than that on and near the centre lines. From wherever these larger prospects open, the middle distances will be quiet, slightly hollowed surfaces of turf or buskets, bracken, sweet-fern, or mosses, the

backgrounds formed by woodsides of a soft, even, subdued tone, with long, graceful, undulating sky lines, which, according to the point of view of the observer on the Park, will be from one to five miles away. Causeways, trees, rocks, and knolls interrupting or disturbing the unity, breadth, quiet, and harmony of these broader open passages of the Park scenery are to come away. There are none of importance that are not of artificial origin and easily removable. Trees wanting to the results proposed are to be planted and suitably developed by timely thinning.

A contrast to the fair open part of the Park which has been thus described will be found in following the circuit road where it is carried between Scarboro Hill and Rock Morton, Rock Milton, Waitwood, and Juniper Hill, through a part of the Wilderness, and between Hagborne and Schoolmaster Hill, all of the localities named being rugged, rocky, and designed to be for the most part somewhat closely planted. A narrow road is thrown out from and brought back to the circuit drive, passing by winding courses among the rocks of the upper part of the Wilderness, by which a higher degree of this character of scenery (serving as a foil to that of the open dales) may be enjoyed than it would be practicable to offer in a broad and much used thoroughfare. The branch drive to the summit of Scarboro Hill, before described, will serve a similar episodic purpose.

Comparatively speaking, this western region is picturesque and romantic; and the design is to remove what is inconsistent with this character, and to add, develop, and expose elements favorable to it.

Drives and Walks.—The roads and walks of the park have been designed less with a purpose of bringing the visitor to points of view at which he will enjoy set scenes or landscapes than to provide for a constant mild enjoyment of simply pleasing rural scenery while in easy movement, and this by curves and grades avoiding unnecessary violence to nature. There is not a curve in the roads introduced simply for the sake of gracefulness. Every turn is suggested by natural circum-

stances. Notwithstanding the rugged surface of the larger part of the site, the circuit drive is at no point steeper than Bromfield Street between Washington and Tremont, its heaviest grade being one in twenty-five; nor are the branch drives at any point steeper than Brattle Street near Court, the steepest pitch being one in sixteen. The Greeting is an inclined plane with a fall from south to north of four feet in half a mile, which is about the same with that of State Street, or essentially level. These grades are obtained without much disturbance of natural features; the heaviest cutting is in continuance of an excavation already made for the quarrying of building stone, the heaviest filling through an adjoining rocky depression. As a general rule, the surface of the roads is to coincide closely with the natural surface, where the natural surface has been hitherto undisturbed. As far as practicable, it is designed to be slightly below it, so that the road may be less observable from a distance.

Riding Pad. — From Boylston Bridge, Back Bay Basin, there will be a shaded pad extending to the Park and through it from Forest Hills to the main entrance from the Playstead. It will be six miles long and from twenty-four to thirty feet wide. There is a double riding course in the Greeting, one division in the central alley, adjoining the carriage promenade, forty feet wide; the other in a side alley thirty feet wide.

Enclosures. — The Country Park is designed to be enclosed with a wall formed of the field stone drawn from its surface, the wall to be four feet high and similar to that first built for the New York Central Park. It is to be draped with vines, and, though not costly, will be perfectly suitable for a rural park. If, as the city is built about the park, a wall of more urban elegance is thought to be required, the stone of the original wall will be used for its foundation. The present enclosing wall of the Central Park, which is but a neat, unobtrusive piece of masonry four feet high on the street side, has probably cost half a million dollars, and is yet incomplete.

Entrances. — Much pressure is generally brought to bear on those controlling a park to establish entrances with a view to neighborhood convenience and favorably to local real estate

speculations. Every entrance is costly in various ways, and there should be none that can be avoided without incommoding the general public. The plan provides ten carriage and foot entrances and eight additional special foot entrances to the park as a whole, and five carriage entrances and two special foot entrances to the Country Park, all at points offering natural facilities of entrance and on easy grades. The average space between entrances is a little more than in the New York park, a little less than in most other large parks.

The drives within the park will be about 6 miles in length; bridle-roads, 2 miles; walks, 13 miles.

The Country Park will contain about 334 acres; Playstead, 40 (of playing ground about 30); Greeting, 19; Music Court, 3; Little Folks' Fair, 14; Deer Park, 18; Sargent's Field, 8; Long Crouch Woods, 20. (Boston Common is 48 acres in area; the Public Garden, 22. The "Green" of the New York Central Park is 16 acres in area; the "Ball Ground," 10; the "North Meadows," 19. The Central Park Mall is half the length of the Greeting.)

The area prepared for public recreation of Franklin Park will be 500 acres; (of the Central Park, 680; Brooklyn Park, 540. The drives of Central Park are 9 miles in length; riding pads, 5; walks, 28).

PART THIRD.

PART THIRD.

THE KEY OF A CONSERVATIVE PARK POLICY AND THE COST OF CARRYING OUT THE PLAN UNDER SUCH A POLICY.

THE project of a rural park for Boston has been more than twenty years under consideration. It has been advanced always deliberately and cautiously. The earlier leaders of the movement in its favor, most of whom have now retired from active interest in local public affairs, and many passed away, were, as a rule, no more anxious to press argument for a rural park than to press the importance of proceeding toward it by slow, frugal, and conservative methods. And this disposition has not only been constant, but has been growing in the community. There has hardly been a public utterance on the subject for several years past in which it has not been manifest. To carry out the scheme that was most prominently before the public fifteen years ago, would have cost more than double as much as to carry out that now in view. There is no party, faction, division, or class of citizens pressing the matter. There are no strong private interests engaged to force it.

The reasons why Boston should proceed in such an undertaking with exceptional caution are fully realized; yet, under the circumstances that have been stated, there can be little danger in pointing out the possibilities of an extravagant holding back.

Twenty years ago—even ten years ago—Boston was not conspicuously behind other cities in providing for the rural recreation of her citizens, but there was an apprehension that she might come to be, and a livelier conviction than at present

that it would be a calamity. In 1869, Mr. Wilder, addressing a meeting called by the City Council, pointed out that Boston to sustain her reputation must not only have a park, but the first park in the country; and seven years later Mr. Collins, at a meeting in Fanueil Hall, called to discuss the park question, asked, "Can Boston afford to be *less* comfortable to dwell in, *less* attractive, *less* healthy than her sister cities?"

If such a question was then at all timely, it is now a great deal more so. There were then but two well advanced rural parks in America. There are now more than twenty. Every city that was then at a parallel stage in the discussion of a park project with Boston, now has that project in a large degree realized, and is enjoying the profits of it. There is not one city of America or of Northern Europe distantly approaching to rank with Boston in population, wealth, and reputation for refinement which, before unprovided with a park, has not gone further and moved more positively than Boston to make good the deficiency. London and Paris, Brussels and Liverpool have each within a generation twice doubled the area of their rural recreation grounds. All the cities of the British Islands thirty years ago possessed but four parks adapted to rural recreation; they now hold thirty, as large, on an average, as Franklin Park is intended to be.

There is an impression with some that the civilized world has been swept by a ruinous rage for parks. Not an instance is known of a park adapted to provide rural recreation that is not regarded by those who are paying for it as well worth all it has cost. No city possessed of a rural park regrets its purchase. During the last year New York City, which has had the largest and costliest experience of park-making of any in the world, has been purchasing land for six additional parks averaging six hundred acres each in area. This after long and heated debate as to questions of extent and location, but upon the undisputed ground, so far as known, that the city's outlay for parks hitherto has had the effect of reducing rather than increasing taxation. Philadelphia has a park nearly six times as large as Franklin Park will be. Chicago has six rural parks, in each of which

large works of construction have been completed, and are found valuable beyond expectation. Even smaller cities than Boston (as New Haven, Bridgeport, Albany, Buffalo, Montreal) have provided themselves with rural parks.

It cannot be questioned that a rural park is rapidly coming to be ranked among the necessities of satisfactory city life, or that a city that offers simply promises or prospects in this respect stands at a certain commercial and financial disadvantage—a more decided disadvantage to-day, very much, than it did when Mr. Wilder or even when Mr. Collins advised attention to the danger.

At the present stage of the Franklin Park undertaking another consideration enforcing a like caution presents itself.

Land having been acquired, a plan for forming a park upon it adopted, operations of construction begun, and considerable resort being had to the ground, the affair is bound to grow in some fashion. And if the work is to be pursued in a desultory, intermittent, and unimpressive way, that fashion will not be altogether the fashion of a desirable rural park. The ground will be much disordered by the work, it will be streaked and scarred, dusty and muddy. There will be an increasing public use of it; the process of determining the customs of its use and the manner in which it is to be regarded by the people will be continuous, and every year something will be done toward an irretrievable settlement of its character.

In their examination of parks last summer, the Commissioners were struck with the different standard of keeping and of manners that had evidently become established on different parks. The keeping in one case was of a sort which in house-keeping might be described as squalid, and the manners largely loaferish. In another the keeping was comparatively neat and efficient, the manners decorous and civil. No matter what may be ultimately expended for a park, its value cannot fail to be largely determined by the expectations and usage of it into which the public is led in the early years of their resort to it.

Boston should continue to practice conservatism with respect to the park, but there cannot be a greater mistake than to sup-

pose that conservatism will be concerned only to keep down the current cost of the work, and to this end will be engaged to impose checks on its progress at every opportunity. Conservatism cannot be concerned to have a state of things under which the leading aim of those in direction of the work is forced to be that of enlisting public support from year to year, by producing results from year to year that shall be immediately pleasing to superficial observation. It cannot fail to be concerned that the work shall be directed with a wise regard to what experience may have taught as to conditions of lasting, growing, and substantial value in works elsewhere of the same leading purpose.

The cardinal requirement of economy in obtaining such conditions has never yet been realized by the public in the early stages of a park work, but it is perfectly plain to any one who has so closely followed the history of a number of parks as to be able to compare marked differences in methods of management and the respective results obtained. It would take too much space to present an extended comparative statement of this kind, but the lesson it would present may be indicated by reference to a few typical facts.

To realize the full bearing of those that will be cited, it must be kept freshly in mind, first, that the only justification of the cost of a large park near a growing city is the necessity of spaciousness to the production of rural scenery.

Second, it must be remembered that the choicest rural park scenery is that which, other things being equal, has been longest growing, and which has the least of the rawness and smartness of new constructions, and the weak puerilities of new plantations.

Third, it is to be kept in mind that the oldest part of the oldest rural park in the country is not yet half grown, and the primary construction of some of its parts is not even yet begun.

Take, then, this oldest park and see by what courses it has come to be what it is, and has been made to cost what it has.

Its site was determined almost by accident; no one, when it was first defined in the bill which became the act establishing it, giving the least thought to the question whether it was well adapted to the purpose of a large park; no one concerned having any clear notion what that purpose might be. In fact the idea in mind was simply this: "The great cities of the old world have large areas called parks, and they are popular. Let us have a great area to be called a park. To neutralize conflicting local jealousies let us have it as nearly as possible in the centre of the city's territory." That was thought to be the common sense of the matter. Not the slightest inquiry was made as to what sort of land there might be at this central point, and so thoughtlessly were the boundaries determined that upwards of a million dollars were judiciously spent after a few years, to secure an economical modification of them. Even since this modification a great sum has been expended in retaining walls and other adjustments between the park and its bounding streets. A few pages further on, official statistics will be quoted, further illustrating the costliness of this common sense proceeding, about which it may be as well to mention that there was nothing peculiarly American or democratic. The Emperor of France began the Bois de Boulogne in the same spirit, trusting to common sense in a matter which was not one for common sense but for careful study and foresighted regulation; fell into blunderings even more humiliating than those of New York, and was obliged to make an abrupt change of plan after his work had been put well under way.

There is no important general public purpose now served, or likely to be served in the future, by the New York Park, for which if ground had been well selected, and if every step in the subsequent operations had been well devised with reference to it, and pursued without unnecessary complexity or confusion, provisions of equal value might not have been made at half the cost of those now possessed by the city.

The degree of public unpreparedness at the outset to sustain such a course, however, may be inferred from the fact that one of the leading newspapers at that time treated the undertaking

as an affair for the benefit of rich men—an affair of fashionable luxury—while another thought that any park in New York would be so entirely taken possession of by the low, rowdy, and ruffianly element of the population, that respectable people would avoid it, and that a woman would not be able to enter it without compromising her reputation. Each of these views turns out to have been as wrong as possible. There is not a church in the city in which rich and poor come together as satisfactorily to both. And for years after it came into use there was not a public street of the city in which a woman or a girl was as secure from rudeness.

The next most instructive circumstance in its history, as far as it concerns Boston at this time, is the gradual advance of public opinion toward a correct understanding of the conditions of the park's value. Such an understanding has not yet, after twenty-nine years, been universally attained. The papers of the city are at this moment denouncing a proposition, made in good faith and urged with elaborate arguments, for introducing an important new feature into the plan of the park. An interview is publicly reported (in the *Sun*, January 15) with a prominent citizen, who urges in counter-argument not the waste that would be involved in the value of the park as a place prepared at great expense for the ready enjoyment of rural scenery, but what is assumed to be the more practical objection of the contraction of areas available for games, a use of the park in which with the present area available for it when the park is in largest use, but one in several hundred of its visitors takes part.*

* The New York *Tribune*, in a leading article of the 10th January, commenting on the proposition, classes it with a thousand others that one after another have been urged upon the Park Commissioners, some of which it recalls as follows: "Persons of quality who delight in steeple-chasing, and those who pursue the fleet anise-seed bag to its lair, have had an eye upon the rolling meadows and dense coppices of the Park as an inviting field for manly sport. Commissioners have been petitioned to throw open the Park as a parade ground for our citizen soldiery, and space has been asked for tents and enclosures for popular exhibitions, circuses, shooting-matches, and trials of strength and skill. Eminent educators have urged that the Park should be planned on the model of a map of our native land, with miniature states, lakes, and rivers, with every

Twice in the history of this park, after enormous expenditures had been made upon it with the stated purpose of excluding urban and securing rural scenery, this purpose has been distinctly and publicly repudiated; in one case, the Superintendent for the time being, explaining to a reporter of the press that his leading object was a display of architectural and urban elegance, and that he had removed certain trees because they prevented visitors passing through the park from seeing the stately buildings growing up outside of it.

But although these incidents may seem to argue otherwise, no one can have long been a reader of New York newspapers without knowing that the public opinion of the city has of late years been often aroused to prevent various proceedings upon the park, running counter to the purpose of rural recreation, that earlier would have been permitted to pass without objection. For example, when the trees of the park were yet saplings, and its designed rural scenery wholly undeveloped, the suggestion that the most central and important position upon it should be given to a public building was received with no apparent disfavor, and one of the Commissioners of the park declared that any ground the promoters of the undertaking

physical and geological feature complete, so that the children of the public schools could be turned loose thereon to study geography in its most attractive form. It has been proposed that each religious sect should be invited to build places of worship there; that one section should be set apart for a World's Fair, and another section as a den for wild beasts, and again that a vast building should be erected there as a sample-room and advertisement for all the wares the merchants of the city have to sell; that the lakes should be enlarged so as to float a full-rigged ship where the great maritime city of the continent could train sailors for our merchant marine; that it should be transmuted into a burial-place for the country's distinguished dead, an experimental farm in the interest of scientific agriculture, and a permanent Metropolitan Fair Ground.

"Now, if the Park is only a big scope of unimproved ground, it is natural that people of different tastes should desire to pre-empt a quarter section here and there for the particular business or pleasure in which they are chiefly interested. For this reason, the people who drive their own carriages, or are able to hire one occasionally, have clamored for widening the wheelways, to give them ample space to roll around and be seen. Other citizens, in less fortunate circumstances have asked that a street railroad be run up through the centre of the Park, so that they might view it from the economical and democratic horse-car."

might desire would be gladly assigned to it. Fortunately, because of hard times, the scheme fell through. Ten years later, a monumental building was actually given a site upon the park, but it was one in which the structure would not interfere with any extended view, or be seen from a distance, and even this concession did not pass without much remonstrance. When the next scheme of the class was disclosed, though coupled with many most attractive incidental propositions, skilfully presented, and supported by eminent citizens, so much popular indignation was soon manifested that in response to petitions a bill was rapidly advanced in the legislature to make it illegal for the Commissioners to entertain the proposition, and would have passed had not the head of the movement publicly and apologetically announced the abandonment of the idea. At the present time, a proposition similar to that once accepted in the case of the Museum of Art, no matter how highly its objects were valued, and no matter how worthy a body of public-spirited citizens were backing it, would be less agreeable to the public opinion of New York than would a proposition to build a public hospital in the middle of the Common to that of Boston.

In the early days of one American park a proposed ordinance to establish a Small-Pox Hospital in its midst was gravely debated in the City Council, being advocated on the ground that there was plenty of unoccupied room there, that no private interest would suffer from it, and that nobody wanted it anywhere else. Many occurrences showing similar public indifference, in the early work of a park, to the essential conditions of its ultimate value, might be cited. At least four times in the history of one park obstructive disturbances of natural scenery have been established, and afterwards, in respect to a rising public sentiment, have been removed. Twice these have been works of alleged art presented to the city and received and set up with acclamation.

Is Boston quite safe from falling into similar costly courses? Has she been so in the past? Let the history of the little but important ground called the Public Garden be considered.

The design first made public for this ground, prepared by an eminent and popular architect, had in view a highly decorative garden, with many beds of flowers and ornamental foliage, architectural basins of water, jets, fountains, and other richly artificial embellishments. The weight of influence in the matter, however, tended toward a parklet in the natural style, simple, quiet, and in a degree sequestered. The plan at length adopted was devised mainly with reference to such a ground, with a slight compromise manifested in a few scattered features which would have been more congruous with a decorative garden. But the work had not gone far before objections were urged to its more important naturalistic features, and several of these, one after another, were modified or radically changed. Large mounds of earth at first formed in accordance with the design were afterwards removed. What was intended to be a rural lakelet with natural borders was changed to a basin with formally curving outlines and a rigid edging of stone. After many years and large outlays made with a plan thus fluctuating in the spirit of its details, the purpose, originally rejected, of a splendid urban garden, with all practicable display of art, was fully revived, and has been gradually carried out as far as it could be without a complete structural transformation of the site, but necessarily under great disadvantages from the necessity of working upon the timbers of a wreck originally modelled with a wholly different ideal. It cannot be doubted that, had all the work from the beginning been undeviatingly directed with reference to the essence of the present leading motives in the management of the ground, more valuable results would have been attained, at much less cost.

Whatever the difficulties may be of avoiding another experience of the same kind, but on a much larger scale, it is best to look them fairly in the face. It is best to beat them, and beat them now, at the start. That it is practicable to do so, and at moderate cost, may be established, if a single instance can be shown in which a city has been able to secure a steady, straightforward, business-like pursuit of the proper purpose of such a park.

Testimony of such an instance that cannot be gainsaid has been furnished the Commissioners from Buffalo, a city that has not earned a reputation for honesty and efficiency of administration exceeding that of Boston.

It is believed that the difficulties of securing a sound public opinion were at the outset much greater in Buffalo than they are in Boston. There was a more general and a more heated apprehension among the tax-payers that the undertaking of a "big park" would be excessively costly. More ignorance and confusion of mind prevailed as to its proper purposes. The history of what has since occurred is summarized in the statement below. Of the gentlemen signing this statement, five have been Mayors of Buffalo during the period in which the park work has been in progress, three Judges of its Courts, three presidents of the Board of Aldermen, five members of Congress, several members of the State Legislature, Commissioners of the Park, leading editors, bankers, and merchants, and heads of the working organization of each party, and of each faction of party of any importance in local politics, a fact in itself evincing the remarkable popularity earned by the management to be described.

A BRIEF HISTORY OF THE RURAL PARK OF BUFFALO, WITH REFERENCE TO ITS MANAGEMENT, COST, AND VALUE.

"There were at the outset many grounds of objection to the site selected for the main Park of Buffalo. Parts of it were rocky and bare of vegetation; other parts swampy and most unattractive. It was at the opposite end of the city from its populous quarter, and more than three miles from its centre. Hence the project had to encounter a strong sectional jealousy, and for this and other reasons met with determined opposition, which succeeded in reducing the area originally intended to be taken—a misfortune since deeply regretted even by those to whom it was due. After the work of construction was entered upon, repeated efforts were made to arrest it; to alter the plans; to introduce new features, and to compel the adoption of different methods of operation.

"In full view of the acknowledged objections to the site, it

was selected as, on the whole, the best that could be found for the purpose exclusively had in view. This was to provide recreation for the people of the city through the enjoyment of simple, rural, park-like scenery. The ground was laid out upon a plan that made everything subordinate to this purpose.

"The work was organized with exclusive reference to the steady and methodical carrying out of the plan. The heads of the organization were drawn from a similar work in another city, and were at once familiar with their duties, disciplined and co-operative. No change in the staff of the superintendence has since been made, except as the work has advanced to points where permanent reduction could be afforded. The present General Superintendent has been Superintendent from the start. In the city reform movement that first brought Grover Cleveland as mayor of the city prominently before the public, no occasion for reform or improvement was found in the park work. No change of men or methods was made or suggested to be desirable. The work has been pursued steadily and without the slightest deviation from the plan upon which it was started. As it advanced and the intentions of the plan approached realization, the park grew in favor. Opposition to it gradually died out. It is now universally popular, and with no class more so than the frugal, small house owning tax-payers, who constitute an unusual proportion of the population of the city.

"The cost of the work has been much less than was predicted by the opponents of the undertaking, and even less than its promoters expected it to be. It is regarded as moderate relatively to the return already realized. It is believed that through the increased attractiveness of the city as a place of residence, the rise in the value of property adjacent to the park and its approaches, and the additional taxable capital invested in land and buildings in the vicinity of these improvements, the outlay for the park has lightened the burden of the tax-payers. The city has recently obtained an act of the legislature authorizing a portion of the land originally thrown out to be purchased and added to the park. Its market value is now estimated to be from four to five times as much as when thrown out. Broad avenues from different directions have been opened, and a street railroad constructed expressly for the use of visitors to the park. Its value is largely increasing every year. The city is now proud of it and grateful for it.

"But its promoters had ultimate results in view, which cannot be fully realized during the lifetime of the present genera-

tion or of the next. As the growth of its plantations develops, as the city extends to its borders and becomes densely settled at the centre, the attractions, the accessibility, and the benefits to the community to be derived from the park, will correspondingly increase. Its chief value lies in its ever-growing capabilities of usefulness in the future, as the city grows in wealth and population.

(Signed)

"PASCAL P. PRATT.	S. S. JEWETT.
SOLOMON SCHEW.	EDWARD BENNETT.
J. MOTHAN SCOVILLE.	JOHN M. FARQUHAR.
JAS. SHELDON.	EDGAR B. JEWETT.
W. S. BISSELL.	FRANCIS H. ROOT.
ALEX. BRUSH.	GIBSON I. WILLIAMS.
JAMES D. WARREN.	R. R. HEFFORD.
HENRY A. RICHMOND.	CHAS. BECKWITH.
SHERMAN S. ROGERS.	WM. F. ROGERS.
PHILIP BECKER.	JOHN B. SACKETT.
DANIEL N. LOCKWOOD.	L. P. DAYTON.
JAMES M. SMITH.	JAMES MOONEY.
JNO. B. WEBER.	WM. FRANKLIN."*

The estimate to be presented of the cost of preparing Franklin Park for public use, will be so much less than has been generally anticipated by those familiar with the cost of parks elsewhere, that it will be received with incredulity. Something, therefore, should be said in explanation of it.

First, it may be observed that more than two-thirds of the cost is calculated to be for the construction of roads, walks,

* Since the above paper was signed, a change has occurred in the city government of Buffalo, and the new Mayor, addressing the new Council, has said: "We have a park system of which we may be justly proud, and there will be very little complaint of the cost so long as the parks are kept in order and made accessible." In a later document, signed by the Mayor and the Park Commissioners, the following congratulatory statement appears: "In looking back over the period since the establishment of the park scheme, the retrospect cannot fail to be exceedingly gratifying. The cost of the parks has been in a large measure compensated by taxes receivable from increased valuation of adjacent property, to say nothing of the health-giving recreation and pleasure the parks afford to thousands who visit them during the summer months. With the rapid increase of our city in wealth and in density of population, have grown up both the need for such recreation and the taste to enjoy it."

concourses and other structures, for the estimates of which the City Engineer is responsible, and that the entire estimate is made in the same manner as that, of about the same amount, prepared for the Department with respect to the work of the Back Bay Basins, which work after a progress of seven years is likely to be completed within the estimate.

That it is possible to meet Mr. Wilder's demand that the Boston park should be the first park in the country, meaning the first in respect to adaptation to provide city people with rural recreation, is largely to be accounted for by the fact that the site was selected discriminately for that purpose.

The advantage gained by this circumstance has already been partly suggested in the statement that the cost of piecing out the New York park has been considerably more than a million dollars. It may be added that the annexations to the primary scheme in the case of the Brooklyn and the Philadelphia parks, made in each case with a view to rural advantages, have been much larger though less costly. In Brooklyn the original site was greatly modified by a process of exchange.

But a more important part of Boston's economical advantage may be inferred from the statement made in the Third Annual Report of the New York Department of Parks that the modifications of the surface of the site of the Central Park had involved the lifting and re-adjustment of its entire surface to an average depth of nearly four feet, and of the material moved that nearly half a million cubic yards had been originally in the form of solid ledge rock, twenty thousand barrels of gunpowder having been used for breaking it out. More than two hundred thousand cubic yards of first-class solid mason work have been laid on the Central Park, a large part under ground and most of it in retaining walls that would have been unnecessary to the proper purposes of a park in a situation as well adapted to those purposes as is that of Franklin Park.

A considerable part of the outlay for most parks has been made for materials which the site for Franklin Park supplies. The stone and gravel of the Chicago parks, for example, is brought to them from distant quarries and pits, and the cost of

transportation is not a small matter. The same is the case at Detroit. The gravel used in the New York and Brooklyn parks has cost twice as much per yard as that to be used in Franklin Park. (It must be said that it is a better sort of gravel.) In Franklin Park there are no difficulties of drainage to be overcome by costly expedients (there are thirty-three miles of sewers in the Central Park). No costly works of damming and puddling or concreting will be required as has been the case elsewhere. And as an illustration of the advantages of its site in these particulars (the plan being adjusted to it) it may be said that the conditions in question of the five hundred acres of Franklin Park are directly the reverse of those which the city has for seven years past been gradually and slowly and at great cost overcoming in the one hundred acres of the Back Bay Basin.

The work required to carry out the plan of Franklin Park can nearly all be done, after practicable training, by a force recruited from the class of working-men who command but the lowest wages, and who are most liable to fall into a condition requiring charitable assistance from the city. More than nine-tenths of the needed outlay would be in wages to citizens. The few manufactured articles necessary would nearly all be manufactured in the city. Not one per cent. of the entire expenditure contemplated would be required for what are commonly called park and garden decorations. The larger part would be for substantial matters, to endure, and generally to gain, in value, for centuries.

Estimates of cost, to have any value, must be based on some definite understanding as to the manner in which the work is to be conducted, the adequacy and what in military operations is called the solidity of the organization, the thoroughness of the discipline, the time within which the work is to be completed, and, above all, the degree in which steady, orderly progress, smoothly interlocking in all parts, can be calculated on.

The work will proceed much more economically with a moderately large force, if kept "well in hand," than with a small one. The reason can easily be seen. It is to be mainly a

transfer of material,—stone, sand, gravel, earth, soil, peat. To proceed with the work at one point certain materials are to be sent away that are wanted for the work at another point, and certain materials are required that are to be taken out at yet another. Unless a force large enough to keep a considerable system of exchanges in operation is employed, the same materials will need to be rehandled, perhaps repeatedly.

It is to be assumed that the work of construction will be completed within a period of six years; that it will be carried on with as large a force as may be best; that advantage may be taken of favorable seasons and favorable markets, and that it will be placed and maintained from the start in all respects upon a soundly economical basis.

The work to be done during the period stated is not to include the public roads and their borders outside the park, as this would extend it beyond the territory under the Commissioners' control. It does not include fountains, sculptural or other purely decorative works that may be thought desirable later, upon the Greeting, or in connection with the gateways, nor does it include movable furniture. But it includes all that is necessary to the making of the park in substantial accordance with its general plan as it has been set forth.

As thus proposed, the work may be expected to cost not exceeding fifteen hundred thousand dollars.*

Maintenance Cost.—The question of the economy of what is proposed in the plan for a park is less a question of what the work of construction will cost than of what ever afterwards will be required for reconstructions, repairs, and for pursuing a system of maintenance adapted to secure its intended qualities of

* The following is a comparative approximate statement of the cost of preparing several large public grounds:—

Central Park	per acre,	\$14,000
Brooklyn Park	" "	9,000
Buffalo Park	" "	1,400
Back Bay Basin and Promenade, as estimated, and in large part realized	" "	14,000
Franklin Park, estimated	" "	2,900

beauty, and keep it in suitable order for its intended uses. An explanation of the character of the plan in this respect will therefore be offered.

Rural parks may be excessively costly of maintenance, either by setting the standard so low that visitors gain but little rural refreshment from them, or by setting it so high that it cannot be lived up to, and they become forlorn through shabby gentility. In some parks both errors are illustrated, high keeping being apparently attempted at some points as a compensation for general gracelessness and dowdiness, with a result like that from putting a few bits of bravery upon a meanly dressed and dirty person. Nearly all American Park Commissioners apologize for the condition of some parts of their work, stating that they are not allowed funds enough to keep them in good order throughout.

In a considerable part of one park examined by the Boston Commissioners last summer, they found roads in very rough condition and dusty gravel walks in such bad repair that they had actually gone out of use, and visitors were trying to walk in lines parallel with them, some making a crooked way among trees and bushes, or over what had once been turfed ground, some turning out upon the wheelway. A family party was seen moving along the ruts of the dusty road, the father dragging a baby wagon, the mother in trepidation lest they should be run over, and the entire party evincing anything but the quieting and restful pleasure that they would have had in a park suitably fitted and kept. Elsewhere they saw lawns from which the turf had wholly disappeared, dry brooks and fountains, green stagnant waters, dilapidated and rotting rustic structures, trees with dead branches, flower-beds gray with dust, set in coarse seedy grass half trodden out, opposite a sign, "Keep off the Grass." They saw a large and substantially fine house, of which the details and furniture were so out of repair that the public had been for some time excluded from it, and its windows appeared to be targets for ambushed boys. The explanation in every case was that the city was unwilling to suitably carry out and sustain what had been undertaken.

It is difficult to make comparative statements of the cost of maintenance of different classes of public grounds. In most cases it is found to vary widely from year to year, and this capriciously, accordingly as successive city councils are disposed. The appropriation for one year has in several cases been but half that for others. Accounts are kept upon different bases.

But omitting police, museum and menagerie expenses it may be roughly reckoned that the annual running expenses of a park of the extent of Franklin Park, if laid out, stocked, and maintained in the manner of the Public Garden of Boston, or of any much decorated, garden-like ground, would be about \$500,000; of the Central Park, New York, \$160,000; Brooklyn Park, \$80,000; Buffalo Park, \$40,000.

The plan adopted by the Commissioners for Franklin Park is one that, when the designed plantings have been well established, will require comparatively little fine garden work, no exotic or fine decorative gardening, no glass, no structures of an unsubstantial class, and few of any kind subject to fall into serious disrepair, except roads and walks. All walls and roofs are to be of stone, tile, or slate; all guard rails and seat supports of stone or wrought iron. The economy of substantial work in all such matters may be seen in the fact that of upwards of forty arches and bridges on the Central Park built more than twenty years ago, all but three were structures of stone, brick, or iron. As a matter of alleged economy, three were built with timber superstructures. Each one of these three has been at times closed for use because of disrepair, each has been entirely rebuilt, and one twice rebuilt; each has already cost more than a substantial structure would have cost, and no one of them is now in a satisfactory condition. The others remain perfectly sound, and with but one important exception have been in continuous service. The exception is an iron bridge with a wood flooring. This has been several times closed for painting and the relaying of the wood-work. A similar story could be told of other structures; and the moral could be enforced by reference to every class of work done on the

park. Its entire history is an indication of the economy of using as sterling masonry and thorough, exacting professional superintendence in park work, as in water-works, sewers, and monumental buildings. If the Commissioners could have taken a different view of their duty, which for the moment would possibly be a more popular view, the estimate they have presented might have been reduced.

To restate briefly the lesson in conservatism most important for Boston to learn from the experience of other cities in park-making, it is this: —

That those in charge of a park work may proceed economically and with profit they must be able to proceed with confidence, method and system, steadily, step after step, to carry to completion a well-matured design. Until the point of completion is reached the work of each year must be the carrying out of work prepared for in the previous year, and the preparation of work to be done the following year. Plans laid with an economical purpose in this respect must not be held subject at any moment to be nullified, or hastily and radically modified, even under worthy impulses of economy.

PART FOURTH.

PART FOURTH.

OF THE DIFFICULTIES OF PURSUING A SOUND POLICY, AND THE MEANS BY WHICH THEY ARE TO BE OVERCOME.

THE difficulties in question are difficulties of securing a sound controlling public opinion and of avoiding a costly accommodation to demands based on mistaken or inadequate impressions of what is desirable in the business of a rural park.

As the notes to follow will be somewhat discursive, and the facts to be stated will have bearings other than those indicated by the headings under which they will be arranged, several master difficulties may be here mentioned to which it is believed that all will relate.

First, the difficulty of realizing the importance of a park work, from which follows the danger that details of serious consequence to the community may be settled too lightly.

Second, the difficulty of understanding the essential economies of so intangible a commodity as that of rural scenery.

Third, the difficulty of realizing how largely the interest of the community as a whole lies in parts and elements of a park that are of little direct personal interest to those who make the largest figure in it, and who have the most direct influence upon the conduct of the work.

Fourth, the difficulty, no matter how important the results of the work to be soon obtained may be, of realizing how immeasurably more important are those to come later.

Fifth, the difficulty to most men of realizing how greatly the cost of suitably preparing a park is to be increased by frequent shifts of responsibility, unsteady courses, breaks of system and of routine methods.

I.

OF THE SUPREME IMPORTANCE THAT A LARGE PARK MAY COME TO HAVE IN THE HISTORY OF A CITY.

IT is contrary to habitual modes of thought to take due account of the comparative economico-political importance of what is at stake in a large park undertaking—to recognize how costly a park may be, otherwise than through the taxation which it directly calls for; how useful it may be in wholly different ways from those most readily and customarily thought about. How it has come to be so will be partly explained later. The purpose of what is immediately to follow is to give a single reason for soliciting a more thorough consideration of various aspects of the subject than the occasion will be generally thought to require.

It is to be considered, to begin with, how much less likely than we are apt to suppose, the larger fortune of a city is, in these days, to turn controllingly and lastingly upon the local legislation that from year to year is led up to and brought about through an activity of local public opinion favorable to its object: how much more the historic course of the city is commonly determined by a discovery or an invention, for example, made by some one having no personal interest or direct part in it, as of a cotton-gin, a steel process, or of gold in a river-bed.

When currents of such exterior sources have once been established, the local defects of a city, with reference to them, are apt sooner or later, at more or less cost, to be remedied. The methods by which needed means for this purpose shall ultimately be reached, may vary radically, as, with reference to the currents of modern oceanic commerce, in the landing and loading facilities of the ports, respectively, of Liverpool, New York, and New Orleans. But the tendency to come nearer to a common standard of utility in essential results is so strong that if at one time a mistake of dealing inadequately with a

problem is made, while the blunder will be costly, it is but a question of time when a sufficiently courageous and well-considered effort is to follow and sweep it away and build anew on firmer ground.

It may be considered, also, how much more cities gain on an average in all that makes them converging points of the growth of nations in population, wealth, and refinement, from general currents of scientific progress by which all the world benefits, than from political proceedings of local origin and special local application.

It is, for instance, through falling into such a current that the ancient city of Cairo has come to be so relieved from its former annual devastations by the Plague, that the life of its people has come to be twice as long as it was in the first half of the century, and the value of life in it has been more than doubled through avoidance of pain, anxiety, and sadness, and the steadier profits of all industry. It is by falling into such a current that most of our southern cities have come to keep at home and in active employment during the entire summer a large part of the population, that would otherwise go out from them at the cost of a general suspension of many profitable branches of their trade, and nearly all important productive industry.

Through the tendency thus illustrated, to work up to standards mainly provided by agencies acting on public opinion from without, and established no one quite knows how, it occurs, notwithstanding the great differences of origin and historical development, of early social circumstances, of climate, of back-country conditions, and of resources of wealth and products to be dealt with, that schools, churches, hospitals, courts, police, jails, methods of fire protection, methods in politics, in benevolence and almsgiving, in journalism, in banking and exchange, are rapidly growing to be closely alike in San Francisco and in Boston.

The change by which this similitude comes about, goes on about as rapidly in the older as in the younger city. In many small ways Boston is taking up customs originating on the

Pacific. In dealing with its sewerage problem, Boston availed itself of Mr. Chesbrough's experience in Chicago, as well as of Mr. Bazalgette's in London; and the Boston Police Commissioners are this winter seeking to engraft on their system, which is of direct descent from Peel's system for London, a scion grown in Chicago. In Europe there is quite as evident a gravitation to American methods as in America to European methods. Paris is just now looking to gain something from observation of the Boston Fire Department, and something from the experience of Memphis in sewerage. One European government has within five years sent expeditions of experts in three different branches of science applicable to the administration of cities, to see by what, in the recent experience of Boston, its people might profit. At least two other European governments have sent skilled agencies here for the same purpose.

Looking for important advantages which one city may possess permanently over another in respect to the constant value of life of those who are to dwell in it, in scarcely anything, perhaps in nothing, will the estate of cities, as it may be affected by local wisdom, effort, and timely legislation, be found to vary more and more lastingly than in the matter of public grounds. In scarcely anything is the general drift of civilized progress to be less depended on to set right the results of crude and shortsighted measures. In scarcely anything, therefore, to be determined by local public opinion acting influentially upon local legislation and administration, is a city as likely to be so much made or marred for all its future as in proceedings in prosecution of a park project.

To many who have not been closely following the history of park enterprises, and tracing cause and effect in connection with them, this will seem to be the assertion of a man with a hobby. But let what has been occurring at the port of New York, in a large degree under the direct observation of thousands of the more active-minded business men of Boston, be thoroughly reviewed, and it will not be found unreasonable.

First, let it be reflected how little of permanent consequence

in the history of New York has come about through the spontaneous movements of local public opinion as reflected in legislation during the last thirty years, of which the broad, essential results were not almost a matter of course. It has been little more than a question of time, for instance, when and how the port should be provided with docks, basins, elevators, and better general water-side facilities for commerce; when certain streets should be widened; when rapid transit for long, and street cars for short, transportation, a civilized cab system, telegraphs, telephones, and electric lights should be introduced, better conveyances across the rivers gained, better accommodations for courts provided, the aqueduct enlarged, public schools multiplied, graded, and made more educational, industrial and night schools started, public museums of art and natural history founded, the militia made more serviceable, the volunteer fire department superseded, and a strong police force organized.

There is nothing of general and permanent consequence in all that has been gained in these particulars that could have been more than delayed and made foolishly costly by careless, capricious, or perverse local public opinion and corresponding legislation. The same general currents of civilization that have brought what has been gained to New York in these respects have brought results answering the same general purposes to Philadelphia and to Boston, to Cincinnati and to Montreal. Or, if not fully so in each case, every live man in those cities looks to see like results reached in a few years,—makes his business plans, builds his house, orders his investments, educates his children, with reference to them. The general plan of the combined city of New York harbor, the position severally, for example, of its domestic, its manufacturing, and its trade quarters, has been very little determined as the result of local legislation or of a settled purpose of public opinion. Such changes of domestic and social habits as have occurred are much less to be attributed to any of these improvements than to circumstances governing the general increase and distribution of wealth throughout the world, to the general advances of science, and to fashions originating in Europe.

But now let it be considered how it has been with regard to what has occurred through the park enterprises. Each of the two large parks that during the same period have been set a-growing through local agitation and the careless legislation it has obtained, has had more such effect than all the other measures of that class together. The Central Park blocks fifty streets that, had it not been formed, would now be direct channels of commerce and of domestic movement from river to river. It takes out of the heart of the city two square miles of building-space, as completely and as permanently as a gulf formed by an earthquake could do, and for several square miles about this place it determines an occupation of land and a use of real estate very different from what would have been otherwise possible. Its effect on social customs may be illustrated by the statement that to enjoy the use of the park, within a few years after it became available, the dinner hour of thousands of families was permanently changed, the number of private carriages kept in the city was increased tenfold, the number of saddle horses a hundredfold, the business of livery stables more than doubled, the investment of many millions of private capital in public conveyances made profitable.

It is often asked, How could New York have got on without the park? Twelve million visits are made to it every year. The poor and the rich come together in it in larger numbers than anywhere else, and enjoy what they find in it in more complete sympathy than they enjoy anything else together. The movement to and from it is enormous. If there were no park, with what different results in habit and fashions, customs and manners, would the time spent in it be occupied. It is often said that the park has made New York a different city. If it has not done so already, it surely will soon have made New York a city differing more from what it would have been but for the park than Boston differs either from San Francisco or from Liverpool.

And the park of Brooklyn, while it has not as yet equally changed the destiny of this branch of the town, is sure, as the city grows, to be a matter of the most important moulding

consequence, — more so than the great bridge ; more so than any single affair with which the local government has had to do in the entire history of the city.

Similar results may be seen, or surely foreseen, from the new parks in each case of Philadelphia, of Chicago, of Buffalo, of St. Louis, of San Francisco.

Not less significant illustrations of the general fact may be found abroad, in Paris and in Liverpool, for instance, and in Melbourne, Australia.

But, it may be asked, if the Central Park had not been formed as it was, would not another park have been formed before this time ? No doubt ; but if so, the results of a different park would have been more importantly different from those that have followed the Central Park than the results of any determination of the city's fortune equally open to be made thirty years ago, through the action of its local government, in any matter of architecture, of engineering, of jurisprudence, or of popular education.

But before the comparative importance of what is to be determined by a park work in the history of a city can be at all realized, a very different view must be taken from that which is common of the irretrievability of any blundering in its direction.

II.

THE ELEMENT OF LASTINGNESS AS AFFECTING THE IMPORTANCE OF WHAT IS TO BE DETERMINED IN THE EARLY WORK OF A PARK.

IT needs to be emphatically urged (for a reverse impression is often apparent) that the plans of no other class of the public works of a city are to be rightly devised with reference to as prolonged and unchanging methods of usefulness as those of parks.

That the fact of the matter in this respect may be understood, let it be first reflected that the value of a large park does not lie, as is apt to be thoughtlessly taken for granted, in those

elements which cost and manifest the most labor and the largest absorption of taxes; that is to say, in the roads, walks, bridges, buildings, and other obviously constructed features. These have value as conveniences for making the larger elements of a park available for the enjoyment of the public. If these larger elements are destroyed, the value of the artificial elements is lost. In the degree that they are ill-treated the value of the artificial elements depreciates. A park road is pleasant by reason of that which adjoins it, or is open to contemplation from it, not because it favors speed. Mainly the value of a park depends on the disposition and the quality of its woods, and the relation of its woods to other natural features; ledges, boulders, declivities, swells, dimples, and to qualities of surface, as verdure and tuftiness. Under good management these things do not, like roads and walks, wear out or in any way lose value with age. Individual trees must from time to time be removed to avoid crowding, or because of decay; but, as a rule, the older the wood, and the less of newness and rawness there is to be seen in all the elements of a park, the better it serves its purpose. This rule holds for centuries — without limit.

It is very different with nearly every other material thing — material in distinction from moral or educational — to which a city may direct outlay from its treasury. The highest value, for example, of civic buildings, of pavements, aqueducts, sewers, bridges, is realized while they are yet new; afterwards a continual deterioration must be expected. As to a park, when the principal outlay has been made, the result may, and under good management must, for many years afterwards, be *increasing in value at a constantly advancing rate of increase, and never cease to increase as long as the city endures.*

This (with an explanation presently to be made in a footnote) will be obviously true as to the principal element of a park — its plantations. But whatever value a park may reach simply through the age of its well ordered plantations, something of that value will be lost wherever repairs, additions, or restorations are made by which the dignity of age in its gen-

eral aspect (or what the ancients called the local genius) is impaired. Looking at the artificial elements of parks in Europe — the seats, bridges, terraces, staircases, or any substantial furniture of them, supposing that they are not ruinous — it cannot be questioned that they are pleasing in the degree that they are old and bear evidence of long action of natural influences upon them — the most pleasing being those which nature seems to have adopted for her own, so that only by critical inspection is human workmanship to be recognized. Hence, not only should park things be built for permanence, but ingeniously with a view to a ready adoption and adornment of them by nature, so that they may come rapidly and without weakness to gain the charm characteristic of old things. For every thousand dollars judiciously invested in a park the dividends to the second generation of the citizens possessing it will be much larger than to the first; the dividends to the third generation much larger than to the second.

The better to bring this class of considerations home, it may be suggested that had five hundred acres of land been set apart as a park for Boston, and trees planted, natural plantations thinned, opened, preserved, renewed, and other natural features protected and judiciously treated for two centuries past, instead of deteriorating as most other public works would have done, the park would have been all the time advancing with a constantly accelerating rate of advance in value. But had the artificial features been originally made *in adaptation solely to the wants of the people of the day* or their immediate successors, an enlargement and re-adjustment of them suitably to a convenient use of the park by the present population of Boston could only be effected by much destruction of the natural features; by the rooting out of great and venerable trees, the blasting of ledges rich in picturesque, time-worn crannies and weather stains, the breaking up of graceful slopes, and the interpolation of much that would be comparatively crude, raw, incongruous, and forlorn. Rather than make radical changes with these results, much inconvenience would long be endured. For two hundred years, conditions of public inconvenience and

of peril and of uncouthness, have rightly been submitted to, for this reason, in Hyde Park, which would not be endured for a year in any new work.

In no other public work of a city, then, is it of as much importance as in a park to determine courses to be pursued with regard to growing results, and in a great degree distant ends rather than ends close at hand and soon to be fully realizable.*

* It is the consideration that the value of a *rural* park grows with its age, and that the value of the immediate result of principal expenditures for construction must be slight compared with those to accrue in after years, added to the consideration that it is a political impracticability to steadily pursue any fixed, definite and limited purposes in park work while those conducting it are dependent for the means of carrying it on upon their ability to immediately satisfy tax-payers of the value of what they are doing, that has elsewhere than in Boston been generally thought to require that the cost of the primary work of a park should be provided for by long loans, even exceptionally to a general administrative policy. Where this course has not been taken, the results have been such as to establish beyond question the extreme importance—the vital necessity to anything like economy—of securing a sound and controlling public opinion at the outset. The park of Detroit (seven hundred acres in extent) is a case of this kind. During all of last summer, work upon it was wholly suspended because a majority of the City Council, and a majority of the Park Commissioners whom a previous City Council had appointed, were not quite of one mind on a question of police regulations, which might have been decided either way without the slightest effect upon any permanent interest of the city in the park. The Council refused to make any appropriation without a pledge from the Commissioners that they would take action contrary to the judgment of a majority of their Board. Consequently the plant of the work lies idle for an entire year, the organization and discipline of the force is lost, the constructions that were in progress are wasting, and the ground is used by the public in a way sure to breed customs and expectations much to be regretted. That a similar catastrophe is not impossible in Boston is fairly to be inferred from an occurrence of the last summer. The Park Commissioners prepared a drawing and numerous cross-sections showing the necessity before any other work could be proceeded with at all economically upon the site for Wood Island Park, of building a bridge by which it would be made accessible, and of doing a large amount of rough grading. For this preliminary work they advised that an outlay should be authorized, to be made during the present fiscal year, of \$25,000. The result was an appropriation of \$5,000, with the condition that it should all be applied to planting. As no planting was practicable without an abandonment of the plan, the appropriation was unavailable.

A liability to such occurrences is oppressively costly in its effects on the management of the work, even when it does not actually result, as it sometimes does,

III.

THE EARNINGS OF A PARK TO A CITY ACCRUE LARGELY THROUGH THE LESS CONSPICUOUS USE OF IT, AND, IF IT IS SUITABLY PLANNED AND MANAGED, THROUGH THE USE OF THE LESS CONSPICUOUS PARTS OF IT.

THERE are two ways of estimating the earnings of a park. There is no doubt that the sixteen millions of dollars which Central Park has cost New York have been returned through the profit that has accrued from the attractiveness of the city as a place of residence for men of means. All classes of the people benefit by the wealth thus brought to and held in the city, and it is generally considered by its financiers that simply through the increased value of real estate which has thus occurred, taxes are lighter than they would have been but for the park.

This is one way in which the value of the park is seen. The other is that which has been already indicated in pointing out the use of it that the leading capitalists of the city have been taught by experience to make, as a means of preserving

in compelling purposes to be adopted of weak, narrow, trivial, short-sighted, and time-serving character for those of more important lasting consequence.

F. L. O.

As the value of everything else to be contemplated in the plan of a park must be forever dependent on the condition of its trees, and as, while every tree of a park may go on improving for a certain period, it must also in time fall into decay and eventually disappear, it may be questioned if a limit is not thus fixed to the alleged advancing value of a well-directed park work.

The answer is that the trees of a park must be expected to decay and disappear one by one, and never, under decently economical management, in such numbers at any time as to materially affect the general aspect of the park, a main condition of good management being that it shall secure the little care necessary to provide a sufficient succession of nurslings (generally through a selection of those self-sown) and thinnings for the purpose. The plan of many parks in Europe, originally private, has remained unchanged for centuries, and they have never hitherto been more finely timbered, never as useful as they are now.

F. L. O.

their faculties in high working condition, — the value in health, vigor, and earning capacity, and in capacity to enjoy results of earnings, which is gained through the use of it. This value is not traceable in such form that it can be entered on the ledger and totalled up in annual statements. In estimating it, every man is, almost irresistibly, overmuch affected by his personal experiences. In ordinary social conference about what is desirable in a park, such a personal point of view sometimes becomes ludicrously apparent.

A gentleman much before the public, and who had taken an active part in urging publicly and privately certain measures of alleged improvement in a park, but who probably had never entered it on foot or seen any part of it not visible from the drives and rides, once asked in passing through it, "What is this pleasant odor?" "It is from the bloom of the locust; we are passing between two groups of it." "I see. Beautiful bloom! beautiful foliage! Why should not that tree be planted more? Why not everywhere? Why should not the park roads be lined with it? Then this delightful scent would be constant, and the beauty also. Why not have the best everywhere?" The answer was, "The tree is not long in bloom, and after midsummer droughts we have few trees less beautiful; where its foliage predominates, as in some parts of New Jersey, it makes the landscape really sad." "That's of no consequence," was the rejoinder, "for nobody wants to see the park in midsummer."

This, while said thoughtlessly, manifested an habitual mode of thought. The man was neither thoughtless nor heartless. Yet the truth is, that the most important purpose of a park, and that through its adaptation to which its largest earnings should be expected, is at the season of the year when the fewest visitors come to it in carriages, when all citizens who can, have gone to the country, and that it lies in conditions, qualities, appliances, and modes of superintendence of which many citizens and most strangers know hardly anything.

To understand this, let the imagination be gradually brought from the consideration of the general, mixed body of park

visitors to the particular point of view of a distinct type. For this purpose let that part of the people be thought of, first, who are able to save enough from daily wages to be distinctly removed from penury, but whose accumulation is too small to relieve them from an anxious and narrowly dogged habit of mind and a strong incitement to persistent toilsome industry. Let it be considered that, setting aside the more floating and transient, and the useless and harmful sections, men of this class, and those who are dependent upon them, form much the larger part in numbers of a city's population. For every storekeeper or head of a shop there are several clerks and workmen. Let it be considered also that those who shortly in the future are to lead in the affairs of the city, are to-day of this class, and are acquiring the aptitudes which are chiefly to determine the strength and character of the city in the early future. Then let it be further considered that more than half the battle for the city's future prosperity lies, in fact, with the matronly element—the housekeeping women—of this class. Let the plan of the park then be regarded, for a moment, from the point of view of this subdivision of those who are to be its owners.

As a rule such women are compelled to live closely, in confined spaces, with a more monotonous round of occupations and more subject to an unpleasant clatter than is wholesome for them or for those whom they are bringing into the world and training. Many are constrained to give themselves up so to live even more confinedly than is necessary, from having a morbid sense of housekeeping necessities, bred by their confined life. In the nervous fatigue that comes upon them, it is easier to go with the current of habit than to make the exertion necessary to find and secure opportunities of relief and refreshment. The misfortune of the housekeeper in this respect, tells day by day, as long as she lives, upon every member of the family, from the master to the infant; its most important result being, perhaps, that of a disliberal educative tendency, a narrow ing, stinting, materialistic, and over-prosaic educative tendency, affecting so many of the city's heirs as may be subject to it.

Suppose that women of this condition could be largely induced to so far break out of their confining habits as, during the season when the schools are closed, to frequently spend part of a day with their children in a place secluded from all the ordinary conditions of the town; a place of simple, tranquillizing, rural scenery, taking their needle-work, and the principal means of a simple out-of-doors repast. Suppose that after work-hours the master of the family and the older daughters, who have been all day in a shop, should join the party, and all should have their supper in the open air, under a canopy of foliage. Suppose that once a week, during the hot weather, a half-holiday should be taken, to provide for which in the regulation of shops is a rapidly growing custom; that parties of friends should be made up to visit and picnic together in the park; what is likely to be the value in the long run of provisions adapted to encourage such practices? The possibility of a general custom of this sort, and the value of it, is a question of how the park is laid out, how it is nursed to grow, and of how it is superintended, and by suitable service made convenient and attractive to such use. The character and habits, then, of these women may with profit be a little further considered.

Not uncommonly those the confinement and monotony and clatter and petty detailed worry of whose lives it would be most profitable for the city to have somewhat broken up are modest, retiring, often shy, of timid disposition, and of nervous temperament, a little thing leading them to painful and wearing excitement and loss of presence of mind.

The idea which many would thoughtlessly be satisfied to see realized in a public park would make it a place to which, coming by street-cars with a number of children, some of them marriageable girls, the mother's day would be one of greater toil, anxiety, irritation, and worry than she would have had at home.

It is an important test of the value of a park that it should be found of such a character, so finished and provided with such service, that a woman under these circumstances would

always find a visit to it economical, restful, tranquillizing, and refreshing for herself and her household.

Such a preparation and management of a park as will make it tolerably satisfactory with reference to this standard will only make it more than tolerably satisfactory to the more robust and less burdened part of the population.

But even a little greater refinement than is thus called for may profitably be aimed at, as will now be shown.

IV.

THE ADAPTATION OF THE PARK TO THE USE OF INVALIDS.

A HIGHLY important part of the business of a park is that of arresting the progress of disease, hastening recovery, and conservating the strength of the weak and the infirm of a city.

It is a common practice with physicians to order patients to be sent to the country. The necessity for doing so is commonly called a necessity for change of air and scene. The importance of the practice is indicated by the fact that the Massachusetts General Hospital Corporation maintains an establishment in the midst of rural scenery, near the Waverly Oaks, expressly for the purpose of hastening and confirming the convalescence of patients first cared for at its general city establishment. It is economical to do so. But it is impracticable to send the vast majority of those who in private practice come under the care of physicians, to be domiciled out of town; nor, in the majority of cases, were it practicable, would it be best to remove them wholly from the comforts of home and the attentions of friends.

There are two conditions on which a visit under favorable circumstances to a suitably equipped park may be very useful. One is where it is a question whether a person is going to be able to throw off a little depression, or must let it be the beginning of a serious illness; the other, at a stage of convalescence when a brief change from the air and scene of a sick-room, a little easy exercise and a little variation from home diet may

greatly hasten a return to a healthy working condition. To make such use of the park as is desirable in either of these cases, a visit to it should not be costly or troublesome or attended with needless worry or apprehension of rude encounters. In several cities what is thus desirable is now in a good degree realized. A weary woman, broken down by watching and anxiety, with a weakly child recovering from the debilitation of summer complaint, may be put by friends on a street-car in a distant part of the city, and be taken to the gate of the park for five cents; may then be assisted by a person appointed for the duty into a low-hung, topped carriage and be driven two or three miles through rural scenery at a cost of ten cents; may be set down to rest and saunter at a pleasant rambling place with seats and drinking fountains scattered along its walks; may find, near by, a house with a woman whose business it is to meet the common necessities of an invalid, without charge, and at which a glass of milk, a cup of tea, or of hot beef broth, or a boiled egg may be had at a cost of five cents, the wholesome quality of these things being assured. She may then return by the carriage and street-car, at a further cost of fifteen cents. The entire outlay of the day thirty-five cents. The city supplies the buildings and the roads and walks and rural scenery, and bargains with contractors for the rest, the contractors finding a profit on the whole transaction.

Let not this statement pass for a romantic fancy. Just that thing has been done many thousand times, and year after year, and in several cities. Charitable societies make contracts under which carriages take poor invalids from and return them to their own doors without charge, but this is another matter. What has been described is no more a matter of charity than the bringing of water and the carrying away of garbage by the city for the same people. Every man whose wife or mother or daughter benefits by it, has the satisfaction of knowing that he is one of the owners of the park, and that he pays from his earnings the full commercial value for the service of the street-car, the carriage, the gardener, the keeper, and the purveyor.

A park on a suitable site, discreetly prepared, and arranged

with reference to the class of considerations that have been suggested, will, simply through the increased savings and increased earning capacity of the industrial masses of a city, make a profitable return for its cost. Yet, in the progress of every large park undertaking, much public discussion occurs with reference to it, in which this element of value and that of the domestic use of it by people of small means are entirely overlooked.

V.

**THE VALUE OF A RURAL PARK TO THE PARTS OF A CITY
MORE DISTANT FROM IT.**

THAT a well prepared and arranged rural park adds greatly to the value of real estate in its neighborhood is well known. It may be questioned if the gain at one point is not balanced by loss at another. But in all growing towns which have a rural park evidence appears that, on the whole, it is not. With a good route of approach, such as was provided by the Champs Elysées and the Avenue du Bois de Boulogne in Paris, Unter den Linden in Berlin, the Parkways in Chicago, and such as will be supplied by Columbia Street, Humboldt Avenue, and the Riverdale Parkway from Back Bay, in Boston, people who ride or drive do not object to a lengthened passage between their residences and a park. As to others, the mass, even of habitual users, do not use a rural park daily, but at intervals, mostly on holidays and Saturdays, birthdays, and other special occasions. How much less than is apt to be considered, in the early stages of a park undertaking, such use of a park is affected by its being at the far side of a town, has been shown in Brooklyn.

When the rural park of Brooklyn was determined on, the people of a part of that city, the most remote from the site taken, pleading their distance from it and the difficulties of communication with it, were able to obtain a special exemption from the taxation that it would enforce. They had local advantages for recreation, and would never, it was thought, want to

cross the town to be better provided in that respect at its opposite side. Nevertheless, long before the plan of the park had been fully carried out, the people of this very district began to resort to it in such numbers that two lines of street cars were established, and on holidays these are now found insufficient, to meet their demand.

There is no doubt that the health, strength, and earning capacity of these people is increased by the park ; that the value of life in their quarter of the town is increased ; that the intrinsic value, as well as the market rating, of its real estate is increased.

The larger part of the people to whom the Brooklyn Park has thus proved unexpectedly helpful are the very best sort of frugal and thrifty working-men, their wives, and their children.

Every successful park (for there are rural parks so badly managed that they cannot be called successful) draws visitors from a distance much greater than its projectors had supposed that it would. It is common for people living out of New York, anywhere within a hundred miles, to visit its park in pleasure parties on all manner of festive occasions. In Paris, the celebration of weddings by the excursion of an invited party to a park and an entertainment in it, is so common with people of moderate means that the writer has seen ten companies of marriage guests in the Bois de Boulogne in a single day.

VI.

THE BEARING OF THE DIFFICULTIES THAT HAVE BEEN REVIEWED UPON THE MAIN END OF THESE NOTES.

FIRST, the chief end of a large park is an effect on the human organism by an action of what it presents to view, which action, like that of music, is of a kind that goes back of thought, and cannot be fully given the form of words.*

* “It gives an appetite, a feeling, and a love that have no need of a remoter charm by thought supplied.” — Wordsworth, with reference to rural scenery. “It would be difficult to conceive a scene less dependent on any other interest than that of its own secluded and serious beauty. . . . the first utterance of those mighty mountain symphonies.” — RUSKIN.

Excellence in the elaboration and carrying out of a plan of work of this kind will be largely dependent on the degree in which those having to do with it are impressed with the importance of the intangible end of providing the refreshment of rural scenery, believe in it, and are sympathetic with the spirit of the design for attaining it. Now, it has happened that Mayors, Members of City Councils, Commissioners, Superintendents, Gardeners, Architects, and Engineers, having to do with a park work, have not only been wanting in this respect, but have been known to imagine that it would be pleasing to the public that they should hold up to ridicule any purpose in a park work not of a class to be popularly defined as strictly and definitely utilitarian and "practical," and should seek to eliminate from it all refinement of motive as childish, unbusiness-like, pottering, and wasteful. In the history of the park of New York, three gentlemen of wealth, education, and of eminent political position, two of them Commissioners of the park, have used the word landscape to define that which they desired should be avoided and overcome on the park. One of them, and a man of good social position, a patron of landscape arts for the walls of private houses, said in a debate in regard to the removal of certain trees: "The park is no place for art, no place for landscape effects; it is a place in which to get exercise, and take the air. Trees are wanted to shade the roads and walks, and turf is wanted because without it the ground would be glaring and fatiguing to the eye; nothing more, nothing else." He believed that in saying this he was expressing the public opinion of the city, and at the time it was not as certain as it has since come to be that he was not.

Second, spaciousness is of the essence of a park. Franklin Park is to take the best part of a mile square of land out of the space otherwise available for the further building of the city of Boston. There are countless things to be desired for the people of a city, an important element of the cost of providing which is ground space. It is the consequent crowded condition of a city that makes the sight of merely uncrowded ground in a park the relief and refreshment to the mind that

it is. The first condition of a good park, therefore, is that from the start a limited number of leading ends shall be fixed upon, to serve which as well as possible *will compel opportunity for serving others on the space allotted to it to be excluded*. The desirability of opportunity for using it for some of the ends thus set aside will be constant, and in a great city there will always be not only thousands in whose minds some one of them will be of more distinct and realizable importance than those that have been provided for in the plan of the ground, and who will be moved to undervalue, relatively to them, that which has been done and been reserved for the accepted purposes; but many thousands more who will fail to see that the introduction of appliances for promoting new purposes is going to lessen the value of the ground for its primary purposes. Where a strong and definite personal interest is taken, even by a few persons, in any purpose that is indirectly and furtively at issue with a purpose of comparatively indefinite general interest to a community, the only permanent security for the efficient sustenance of the larger purpose lies in a strong conviction of its importance pervading the community.

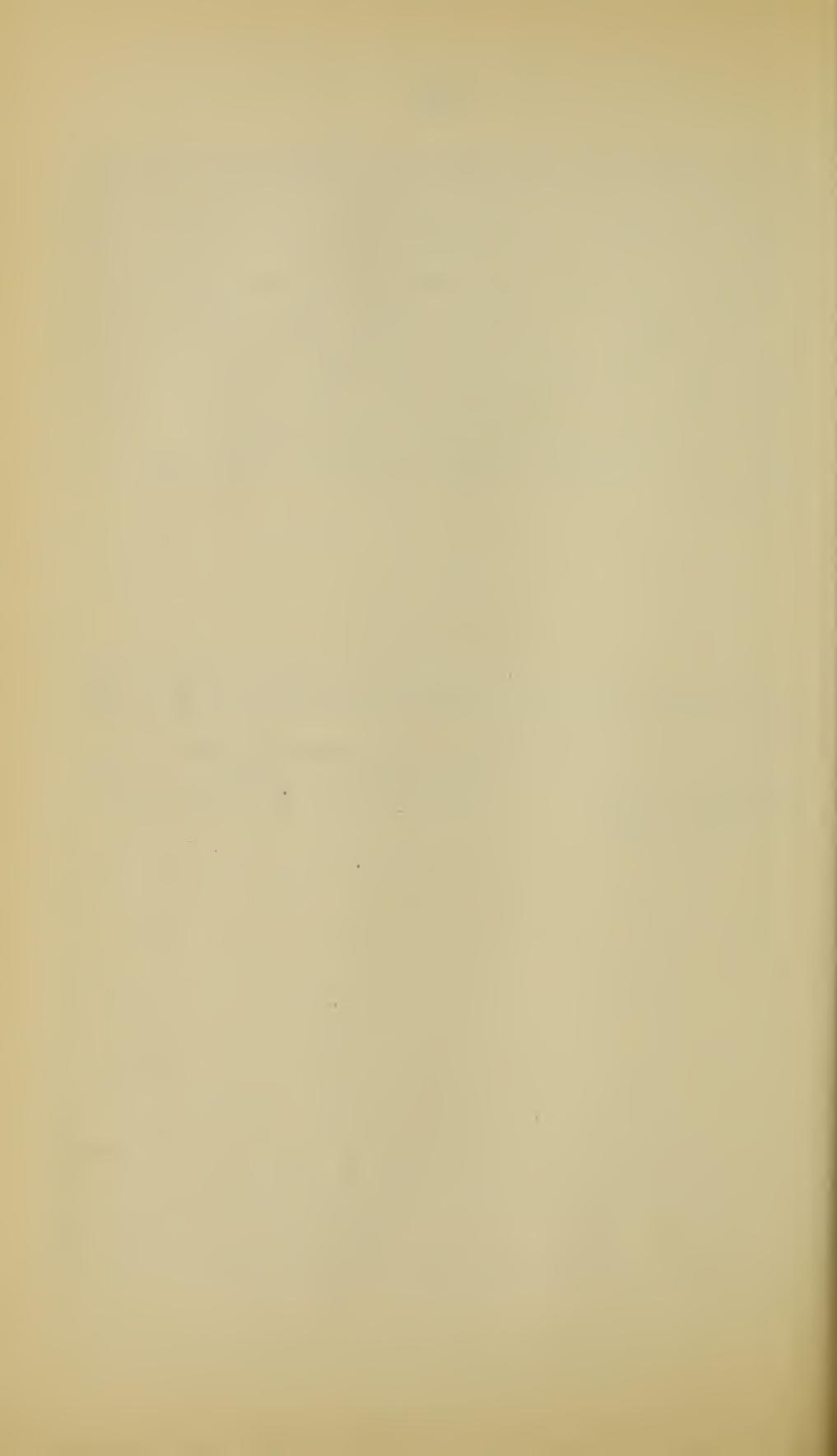
Such a conviction cannot be expected to develop intuitively or spontaneously, at an early period of a large park undertaking, because the work will as yet be supplying little of immediate and direct pleasing interest to the public. On the contrary, the earlier work on a park site is apt to destroy, for the time being, much of whatever rural beauty it may possess. Such is the first result of operations in drainage, in road-grading, and in tillage, for example:—such the result of all operations for the improvement of woodlands. Even a new plantation, if well designed for future beauty, is apt at first to make an unpleasant impression; and, while the heavy work of park construction is going on, with much blasting of rocks, loaded carts occupying the roads and crossing the ground in all directions, and squads of workmen everywhere, the experience of visitors can hardly fail to be adverse to a right understanding of the aims of the work.

In the management of a large park it is then of the first

importance that the people to whom its managers are responsible should be asked and aided to acquaint themselves, otherwise than by observation on the ground, with the general plan upon which it is to be formed, to understand the leading ends and motives of this plan, the dependence of one part upon another, the subordination of the minor to the major motives, and to take an intelligent and liberal interest, and a well-grounded satisfaction, in its development through growth, as well as through the advance of constructive operations the results of which are to be of value only as they are fitted to serve as implements by which to obtain enjoyment of the results of growth.

"And this the more, because it is one of the appointed conditions of the labor of men, that, in proportion to the time between the seed-sowing and the harvest is the fullness of the fruit."

"Let it not be for present delight, nor for present use alone; let it be such work as our descendants will thank us for, and let us think . . . that a time is to come when . . . men will say '*See! this our fathers did for us.*'"—**SEVEN LAMPS.**



PART FIFTH.

PART FIFTH.

THE PARK AS A DEPARTMENT OF EDUCATION.

THERE is yet one aspect of the scheme too important to be left wholly unconsidered in a review of the design. As a seat of learning and an "Academy," Boston is yet the most metropolitan of American cities. Others are gaining at many points with gratifying rapidity; but, on the whole, Boston is moving in a more simply evolutional and democratic way, taking ground less by forced marches and at isolated points in advance of her main line, consequently with a firmer footing. Her advantage in this respect is a good form of civic wealth. Any sterling addition to it is worth more to the reputation and commercial "good-will" of the city than an addition of the same cost to its shops, banks, hotels, street railroads, or newspapers. The Arboretum, with the library, cabinets, laboratory, correspondence, and records, of which it will be the nucleus, will not simply bring a certain excellent accession to the population of Boston; it will extend her fame, and will make in a measure tributary to her every man on the continent who wishes to pursue certain lines of study, and lines rapidly coming to be known as of great economic national importance.

The Park, if designed, formed, and conducted discreetly to that end, will be an important addition to the advantages possessed by the city in the Athenæum, in the Museum of Art, in the examples of art presented in some recent structures and

their embellishments, and in the societies and clubs through which students are brought into community with men of knowledge, broad views, and sound sentiment in art.

To see something of its value in this respect, imagine a ground as near the centre of exchange of the city as the Agassiz Museum or the Cambridge Observatory, in which, for years, care has been taken to cherish broad passages of scenery, formed by hills, dales, rocks, woods, and humbler growths natural to the circumstances, without effort to obtain effects in the least of a "*bric-à-brac*," "*Jappy*," or in any way exotic or highly seasoned quality.

What would be the value of such a piece of property as an adjunct of a school of art? The words of a great literary artist may suggest the answer:—

"You will never love art till you love what she mirrors better."

If we would cultivate art we must begin by cultivating a love of nature, and of nature not as seen in "collections" or in mantel-piece and flower-garden ornaments.

As to the value that a park may have in this respect, the use may be recalled that is made by the art students of Paris, with the doors of the Louvre always open to them, of the out-of-door gallery of Fontainebleau, thirty miles away. There are no rocks at Fontainebleau more instructive than those to be had in Franklin Park. The woods of Fontainebleau that have been the models of a thousand painted landscapes, being mostly of artificially planted trees, grown stiffly for the timber market, and not for natural beauty, are no more art-educative than woods that may be had on Franklin Park. And though the region to which the name Fontainebleau is applied is so much larger, it offers the student no better examples of landscape distance, intricacy, obscurity, and mystery than may be had in Franklin Park.

But the art aspect of the scheme cannot be fairly seen from the point of view of the school of the artist. The value of an artist in the economy of a city, is as one of many agencies for the exchange of services. The artist dies when the love of art and of what art mirrors is dead.

Would you have an art-loving people? Take them to nature, and to nature not as it is to be enjoyed in glass cabinets, or in rows of specimens, or in barbered and millinered displays, or as wrought into mosaics, embroideries and garden ribbons. Let them enjoy nature, rather, with as much of the atmosphere of scenery and on as large a scale as the walls of your school will allow.

The main difficulty of gaining such an addition to the Boston Academy is that which lies in the momentary impatient misunderstanding of the public, or of those who speak for the public, of a policy that does not propose to make a great show from year to year for the public money from year to year expended, and that does not look to making a splendid show at any time.

Such misunderstanding and such impatience is not likely to have a permanently and gravely disturbing effect on such a work as that of Back Bay, where the justifying end is to be reached wholly by engineering skill, and into which art enters only as a process of dressing, but it may easily be absolutely disastrous where this condition is reversed, as to any success in its justifying purpose it must be, in the undertaking of Franklin Park.

City of Boston.

DEPARTMENT OF PARKS.

THIRTEENTH ANNUAL REPORT

OF THE

BOARD OF COMMISSIONERS

FOR THE

OFFICE OF
CITY ENGINEER,
BOSTON.

YEAR 1887.



PRINTED FOR THE DEPARTMENT.

1888.

PRESS OF
ROCKWELL AND CHURCHILL
BOSTON

DEPARTMENT OF PARKS.

REPORT.

To the Honorable the City Council of the City of Boston: —

Section 15 of the Act of 1875, Chapter 185, entitled "An Act for the laying out of Public Parks in or near the City of Boston," requires that the Board of Park Commissioners "shall annually, in the month of January, make to the City Council of Boston a full report of its doings for the preceding year, including a detailed statement of all their receipts and expenditures."

In accordance therewith the Board has the honor to submit the following report: —

FINANCIAL STATEMENTS.

I.

*Receipts and Expenditures of the Department for the Year
1887.*

THE PARKWAY.

LAND ACCOUNT.

BACK BAY FENS.

Balance unexpended, Dec. 31, 1886	. . . . .	\$6,639 57
Amount transferred from loan for Public Park Lands,	28,473 75	
	—————	\$35,113 32 —————

Expenditures.

Amount paid for land in 1887	\$35,113 32
--	-------------

MUDY RIVER.

Balance unexpended, Dec. 31, 1886	\$104,148 88
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Expenditures.

Amount paid for land in 1887	\$35,018 80
Balance unexpended, Dec. 31, 1887	69,130 08
	\$104,148 88

CONSTRUCTION AND MAINTENANCE.

Amount transferred from loan for Public Park Construction	\$164,142 25
Amount transferred from Income and Appropriation for Maintenance	1,319 40
	\$165,461 65

EXPENDITURES FOR CONSTRUCTION.*Sidewalks, Gutters, and Drainage.*

Roadways, labor, and materials	\$37,480 97
Curbs and walks, labor, and materials	20,558 86
Gutters, labor, and materials	8,908 50
Drainage, labor, and materials	6,234 16
	\$73,182 49

Agassiz Bridge.

Expenses of construction, labor, and materials	38,768 48
--	-----------

Excavating, Grading, Loam and General Work.

Grading, labor, and materials	\$16,037 38
Dredging, labor, and materials	10,394 06
Superintendence and general work,	7,115 15
Loam, labor, and materials	2,560 92
Engineering expenses	823 63
	36,931 14

Plantations.

Labor and expenses	9,034 71
------------------------------	----------

Machinery, Tools, and Implements.

Stone-crusher, road-rollers, water-carts, etc.	3,653 37
--	----------

<i>Amount carried forward,</i>	\$161,570 19
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Amount brought forward, \$161,570 19

Plans and Designs.

F. L. Olmsted, Landscape Architect, and expenses, 1,825 06

Beacon Entrance Bridge.

Standards and lanterns, materials and labor . . .	747 00
	<hr/>
	\$164,142 25

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Watchmen, labor, and expenses	\$985 74
Repairing Beacon Entrance Bridge	161 15
Repairs, and care of buildings, Muddy	
River	114 01
Paid Police Department.	58 50
	<hr/>
	1,319 40
	<hr/>
	\$165,461 65
	<hr/>

ARNOLD ARBORETUM.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1886	\$67 29
Transferred to Public Park Sinking Fund.	<hr/>

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1886	\$24 54
Amount transferred from Income and Appropriation for Maintenance	1,609 36
Amount transferred from loan for Public Park Construction	34,652 14
	<hr/>
	\$36,286 04
	<hr/>

EXPENDITURES FOR CONSTRUCTION.

Driveways.

Expenses of construction, labor, etc.,	\$32,482 13
Fuel, supplies, carting, etc.	930 83
Materials of construction	784 18
Engineering expenses	479 54
	<hr/>
	\$34,676 68
<i>Amount carried forward,</i>	<hr/>
	\$34,676 68

Amount brought forward, \$34,676 68

EXPENDITURES FOR MAINTENANCE.

Park Police.

Pay of men	\$1,191 81
Police equipments and supplies	2 00
	<hr/>
	\$1,193 81

Care of Grounds and Buildings.

Watchmen, labor, and expenses	\$376 65
Signs and notices	38 90
	<hr/>
	415 55
	<hr/>
	1,609 36
	<hr/>
	\$36,286 04
	<hr/>

FRANKLIN PARK.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1886	\$109,344 84
Amount transferred from loan for Public Park	
Lands	314,838 42
	<hr/>
	\$424,183 26
	<hr/>

Expenditures.

Amount paid for land in 1887	\$424,183 26
	<hr/>

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1886	\$0 80
Amount transferred from Income and Appropriation for Maintenance	7,969 76
Amount transferred from loan for Public Park Construction	151,520 27
	<hr/>
	\$159,490 83
	<hr/>

EXPENDITURES FOR CONSTRUCTION.

Driveways.

Grading roads	\$47,997 43
Surfacing roads	15,191 21
Paving blocks	3,554 75
Water pipes	329 15
	<hr/>
	\$67,072 54

Amount carried forward, \$67,072 54

Amount brought forward, \$67,072 54

Clearing and Grading Grounds, Drainage and General Work.

Grading grounds	\$34,984 36
Drainage	10,624 80
Superintendence and general work	6,661 65
Clearing grounds	3,581 20
Engineer's expenses	3,197 39
	<u>59,049 40</u>

Overlook.

Materials, labor and expenses	7,704 73
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Plans and Designs.

Plan and design of Franklin

Park	\$5,000 00
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Landscape Architect and ex-

penses	1,546 75
	<u>6,546 75</u>

Playstead Green.

Labor and materials	6,221 08
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Machinery, Tools, and Implements.

Stone-crusher, road-rollers, and water- carts	3,941 17
--	----------

Plantations.

Labor and expenses	985 40
	<u>\$151,521 07</u>

EXPENDITURES FOR MAINTENANCE.

Park Police.

Pay of men	\$5,712 13
Equipments and supplies,	559 50
	<u>\$6,271 63</u>

Care of Grounds and Buildings.

Expenses in care of grounds and buildings	\$920 99
Labor in care of grounds and buildings	641 83
Signs and notices	135 31
	<u>1,698 13</u>
	<u>7,969 76</u>
	<u>\$159,490 83</u>

CHARLES RIVER EMBANKMENT.

LAND ACCOUNT.

Balance unexpended, Dec. 31, 1886	\$113 55
---	----------

Transferred to Public Park Sinking Fund.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1886	\$31 44
Amount transferred from Income and Appropriation for Maintenance	1,066 24
Amount transferred from Loan for Public Park Construction	13,168 67
	<hr/>
	\$14,266 35

EXPENDITURES FOR CONSTRUCTION.

Filling, Grading, and General Work.

Grading, labor	\$9,233 68
Filling material	1,986 75
Loam	1,373 80
General work	511 46
Engineering expenses	66 42
Coach-hire	11 50
	<hr/>
	\$13,183 61

Plans and Designs.

Landscape Architect's expenses	16 50
	<hr/>
	\$13,200 11

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Repairs and care of buildings and grounds	\$589 24
---	----------

Park Police.

Pay of men	477 00
	<hr/>
	1,066 24
	<hr/>
	\$14,266 35

MARINE PARK.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1886	\$569 72
Amount transferred from Income, and Appropriation for Maintenance	2,584 76
Amount transferred from loan for Public Park Construction	20,480 14
	<hr/>
	\$23,634 62

EXPENDITURES FOR CONSTRUCTION.

Structures.

Amount paid under contract with Build-

ers' Iron Foundry for iron pier	\$18,041 25
Refectory building and fence	631 16
Inspection and engineering expenses	458 51
Temporary pier, gas-lights, labor, and supplies	236 74
Advertising	112 18
Printing	36 54
	————— \$19,516 38

Grading and General Work.

Grading grounds	\$684 35
Superintendence and general work	327 94
Coach-hire and expenses for committee of Legislature	76 00
	————— 1,088 29

Plans and Designs.

Landscape Architect	445 19
	————— \$21,049 86

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Watchmen and labor on grounds	\$1,989 84
Expenses in care of grounds and buildings	580 67
Signs and notices	14 25
	————— 2,584 76
	————— \$23,634 62

WOOD ISLAND PARK.

CONSTRUCTION AND MAINTENANCE.

Balance unexpended, Dec. 31, 1886	\$33 33
Amount transferred from loan for Public Park Construction	30,139 94
	————— \$30,173 27

EXPENDITURES FOR CONSTRUCTION.

Neptune Bridge.

Amount paid Sylvester & Rowe, under their contract for bridge abutments,	\$28,977 00
Inspection and engineering expenses . . .	819 35
Printing and advertising	84 04
	—————
	\$29,880 39

Plantations and General Work.

Superintendence and general work	\$176 66
Plantations, labor, and materials	116 22
	—————
	292 88
	—————
	\$30,173 27
	—————

DEPARTMENT APPROPRIATION.

Balance unexpended, Dec. 31, 1886	\$2,349 16
Appropriation for the financial year 1887-88	6,500 00
	—————
	\$8,849 16
	—————

GENERAL ACCOUNT.

Expenditures.

Salary of secretary and clerk	\$3,000 00
Clerical service at office	1,720 00
Printing annual report, etc. . . .	914 77
Telephone and messenger service and incidental expenses	548 00
Stationery	194 03
Surveying Muddy River lands . . .	85 94
Expenses of City Council committee's visit to the parks	65 00
Coach-hire	63 00
	—————
Balance unexpended, Dec. 31, 1887	\$6,590 74
	—————
	2,258 42
	—————
	\$8,849 16
	—————

PARK NURSERY.

Balance unexpended, Dec. 31, 1886	\$925 11
Amount transferred from Income Account	181 57
Appropriation for the financial year 1887-88	5,000 00
	—————
	\$6,106 68
	—————

Expenditures.

Labor	\$4,241 12
Expenses in care of propagating house and nursery,	332 99
Assistant Landscape Gardener and expenses . . .	240 61
Plants	6 70
Balance unexpended Dec. 31, 1887	1,285 26
	<hr/>
	\$6,106 68
	<hr/>

APPROPRIATION FOR MAINTENANCE.

Appropriation for the financial year 1887-88 . . .	\$15,000 00
	<hr/>

Expenditures.

Paid on account of Franklin Park	\$6,460 08
Paid on account of Marine Park	1,972 44
Paid on account of Arnold Arboretum	937 46
Paid on account of Charles River Embankment . .	642 64
Paid on account of Parkway	515 20
Balance unexpended Dec. 31, 1887	4,472 18
	<hr/>
	\$15,000 00
	<hr/>

INCOME.

Receipts.

Balance remaining, Dec. 31, 1886	\$941 34
Received from premiums on loans	57,600 00
Received from rents and sale of buildings, grass, stone, and old materials	7,418 77
Received from forfeit, under contract	100 00
	<hr/>
	\$66,060 11
	<hr/>

Payments.

Paid into Public Park Sinking Fund	\$57,603 23
Transferred to Franklin Park	1,509 68
Transferred to Parkway	804 20
Transferred to Arnold Arboretum	671 90
Transferred to Marine Park	612 32
Transferred to Charles River Embankment . .	423 60
Transferred to Park Nursery	181 57
Paid City Collector forfeit under contract . .	100 00
Balance remaining, Dec. 31, 1887	4,153 61
	<hr/>
	\$66,060 11
	<hr/>

PUBLIC PARK LANDS.

Public Park Loan, issued July 29, 1887	\$310,000 00
Public Park Loan, issued Aug. 13, 1887	90,000 00
	<u>\$400,000 00</u>

Expenditures.

Paid on account of Franklin Park	\$314,838 42
Paid on account of Parkway	28,473 75
Balance unexpended Dec. 31, 1887	56,687 83
	<u>\$400,000 00</u>

PUBLIC PARK CONSTRUCTION.

Public Park Construction Loan, issued Feb. 21, 1887	\$500,000 00
	<u>\$500,000 00</u>

Expenditures.

Paid on account of Parkway	\$164,142 25
Paid on account of Franklin Park	151,520 27
Paid on account of Arnold Arboretum	34,652 14
Paid on account of Wood Island Park	30,139 94
Paid on account of Marine Park	20,480 14
Paid on account of Charles River Embankment	13,168 67
Balance unexpended Dec. 31, 1887	85,896 59
	<u>\$500,000 00</u>

II.

Summary of Receipts and Expenditures on account of Parkway Construction from July 23, 1877, to Dec. 31, 1887.

PARKWAY CONSTRUCTION.

BACK BAY FENS.

Receipts.

From appropriations for Back Bay	\$1,082,179 39
From loan for Public Park Construction	164,142 25
From appropriations for Park Department	22,868 85
From Income Account	3,449 41
	<u>\$1,272,639 90</u>

Expenditures.

Filling	\$453,577 23
Excavating, grading, loam, and general work .	314,546 62
Retaining-walls, curb and fence	107,284 71
Boylston bridge	92,011 43
Sidewalks, gutters, and drainage	87,100 06
Beacon-entrance bridge	56,675 79
Railroad bridge	39,995 04
Agassiz bridge	39,396 12
Plantations	29,026 23
Plans and designs	20,975 31
Office and general expenses	14,114 92
Machinery, tools, etc.	12,464 28
Surveying	5,472 16
	————— \$1,272,639 90
	—————

III.

Receipts and Disbursements of the Department from the Organization of the Board, Oct. 8, 1875, to Dec. 31, 1887.

PUBLIC PARK CONSTRUCTION AND MAINTENANCE.

Receipts.

Public Park Loan for lands, less balances merged	\$2,883,791 73
Appropriations, less transfers, merged balances, and betterment expenses	1,539,646 05
Public Park Construction Loan	500,000 00
Income appropriated to maintenance	51,984 63
	————— \$4,975,422 41
	—————

Disbursements.

Franklin Park land	\$1,414,838 42
Parkway construction	1,276,639 90
Parkway land	625,343 67
Charles River Embankment land	370,886 45
Marine Park land	232,972 57
<i>Amount carried forward,</i>	\$3,920,681 01

<i>Amount brought forward,</i>	\$3,920,681 01
Charles River Embankment construction	190,168 67
Franklin Park construction	185,268 41
Arnold Arboretum construction	93,652 14
Arnold Arboretum land	79,932 71
Wood Island Park construction	63,690 61
Marine Park construction	61,888 40
Wood Island Park land	50,000 00
General account	38,650 59
Franklin Park maintenance	28,074 05
Park Nursery	16,981 98
Arnold Arboretum maintenance	6,595 17
Charles River Embankment maintenance	6,387 65
Marine Park maintenance	5,604 82
Parkway maintenance	3,912 90
Wood Island Park maintenance	49 33
Balance unexpended, Dec. 31, 1887	223,883 97
	————— \$4,975,422 41

PUBLIC PARK DEBT AND SINKING FUND.

Receipts.

Appropriations for interest on debt	\$508,897 24
Appropriations for Sinking Fund	311,125 00
Received from betterments, less refunded	310,139 35
Interest on bank deposits and investments	123,717 00
Income applied to the payment of debt	94,000 00
Income paid into Sinking Fund	60,958 61
From Park appropriations for Betterment Expenses	9,677 62
Unexpended balances of loans for Park lands paid into Sinking Fund	180 84
	————— \$1,418,695 66

Disbursements.

Interest on Public Park debt	\$508,897 24
Debt paid by Sinking Fund	450,000 00
Public Park Sinking Fund	342,067 49
Debt cancelled by revenue and betterments	99,000 00
Betterment expenses	9,677 62
Betterments held under protest	9,053 31
	————— \$1,418,695 66

DEBT STATEMENT.

The Public Park Debt, Dec. 31, 1887, to be paid as it becomes due from the Resources of the Public Park Sinking Fund.

West Roxbury Park, 4% Loan, due Jan. 1, 1913	\$233,000 00
Arnold Arboretum, 4% Loan, due Jan. 1, 1913	60,000 00
East Boston Park, 4% Loan, due Jan. 1, 1913	50,000 00
West Roxbury Park, 4% Loan, due April 1, 1913,	300,000 00
Charles River Embankment, 4% Loan, due April 1, 1913	285,000 00
City Point Park, 4% Loan, due April 1, 1913	209,000 00
Muddy River Improvement, 4% Loan, due April 1, 1913	119,000 00
West Roxbury Park, 4% Loan, due Jan. 1, 1914,	500,000 00
Muddy River Improvement, 4% Loan, due April 1, 1914	75,000 00
Charles River Embankment, 3½% Loan, due Oct. 1, 1915	16,000 00
City Point Park, 3½% Loan, due Oct. 1, 1915	13,000 00
Arnold Arboretum, 3½% Loan, due April 1, 1916	20,000 00
Charles River Embankment, 3½% Loan, due Oct. 1, 1916	55,000 00
Public Park Lands, 3½% Loan, due July 1, 1917	400,000 00
Public Park Construction, 3½% Loan, due Jan. 1, 1937	500,000 00
<hr/>	
Total Debt	\$2,835,000 00
Less the means in the Sinking Fund, and in hands of City Treasurer, for paying the same, Dec. 31, 1887	351,120 80
<hr/>	
Debt, less means for paying	\$2,483,879 20
<hr/>	

SINKING FUND STATEMENT.

Resources of the Public Park Sinking Fund, Dec. 31, 1887, in hands of Sinking Fund Commissioners; being Bonds of the City of Boston and Cash, with the Dates when the Bonds become due.

West Roxbury Park, 4% Loan, due Jan. 1, 1913	\$100,000 00
Arnold Arboretum, 4% Loan, due Jan. 1, 1913	60,000 00
East Boston Park, 4% Loan, due Jan. 1, 1913	50,000 00
Muddy River Improvement, 4% Loan, due April 1, 1913	19,000 00
Cochituate Water, 4% Loan, due April 1, 1917	25,000 00
Cochituate Water, 3% Loan, due April 1, 1917	25,000 00
 Total investments	\$279,000 00
Cash	63,067 49
 Total resources	\$342,067 49

PARK CONSTRUCTION.

The following is an account of the operations of the Department during the past year, with some suggestions concerning its future work. A more detailed statement by the Engineer will be found in the Appendix.

Wood Island Park.—The abutments for the bridge over the Boston, Revere Beach, & Lynn Railroad have been completed. This, together with the planting of trees on Neptune Road, was all the work contemplated for the season. The building of the bridge itself, together with some grading, will be the work of another season.

Marine Park.—A contract for seven hundred feet of the permanent iron pier was made, and fourteen cylinders, of five feet diameter, two to a bent, embracing a length of three hun-

dred and sixty feet, have been successfully placed. A continuance of this construction, and such other work as can in the meantime be undertaken, will be the work of next season.

Charles River Embankment. — The work on the Embankment has been so far completed that the raised parts are receiving a dressing of loam and manure, and the playground at the northerly end is being covered with gravel. The Pav-ing Department is removing its buildings and material from the southerly end. Planting, and completing the walks will be the work of next season.

The Parkway—Back Bay Fens. — A large force has been employed on the work of this important feature of the park system, and the roadway from Commonwealth Avenue to the Westland Entrance has been substantially completed. Boylston Entrance has been completed so far as this Department is concerned, but the raising of buildings on the connecting street delays the opening of it to the public. The completion of the other roads around the lower basin has been delayed by the lack of crushed stone, and the scarcity of skilled pavers because of the large amount of work in their line in the city.

The amount of crushed stone required for the roads is large, and the crusher will be run during the winter that no lack of this kind of material shall be hereafter experienced.

The arches of Agassiz Bridge are being rapidly laid, and arrangements have been made for continuing the work successfully during the winter.

The future policy will be the pushing to the utmost of the work according to the designs heretofore adopted, the Board not having found it necessary to make any change in them.

Arnold Arboretum. — The work laid out for the year has been completed, namely, the building of the road to the top

of Bussey Hill, and the grading of the adjoining ground. The expense of this work has exceeded the amount named in the indenture with Harvard College, but the Board was instructed by the corporation counsel and city solicitor that the amount was not inserted as a limit of the expenditures of the Department. The future work will be a continuation of the roads within the Arboretum.

Franklin Park. — The work on this park has been pushed with vigor. The Playstead is completed, and only awaits that the greensward may become a compact turf. The road around it has had so much work done upon it that it will be ready for use before the end of another season. The bulk of the work on the Overlook has been done. Its completion is delayed by the difficulty of procuring the stone for the parapet. This will also be ready for use before next winter.

The Board intends during the next season to make all progress possible with the roads in the Country Park. It should be borne in mind that in the taking of stone from the Playstead, in the laying of drains, and in other particulars, an enormous amount of the work done upon Franklin Park is now under ground and out of sight.

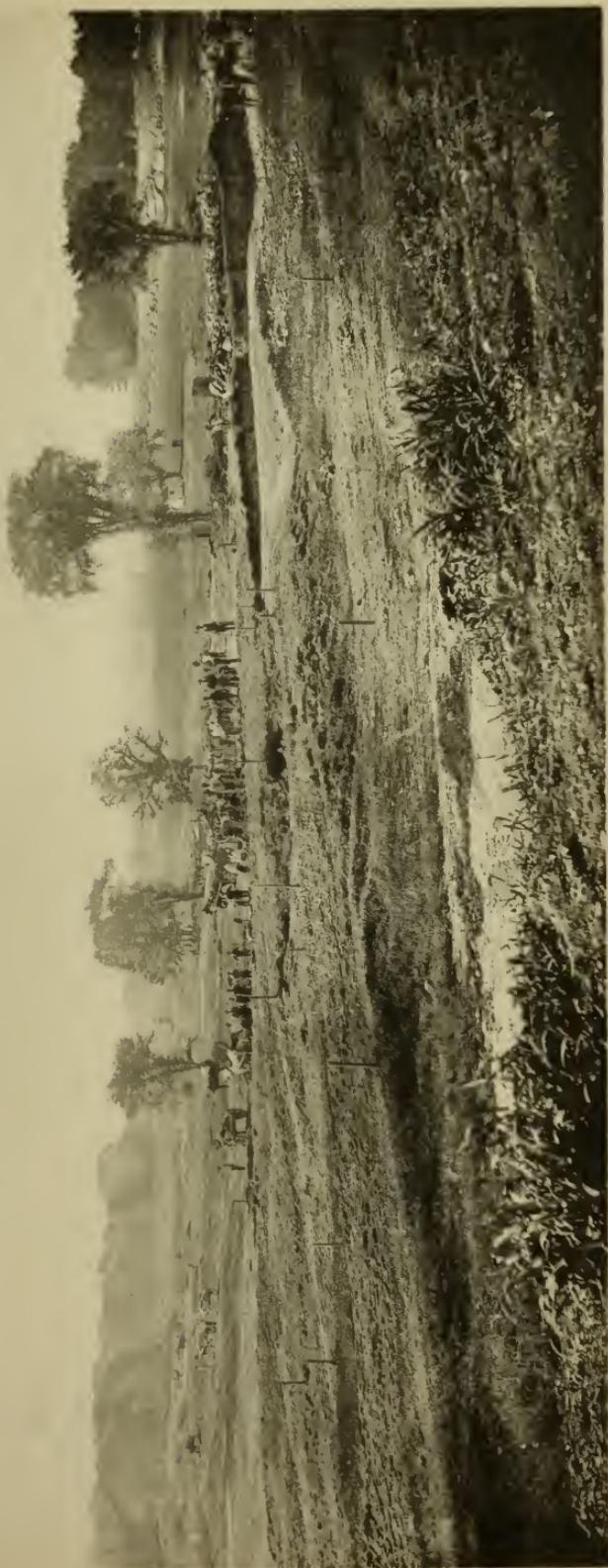
BACK BAY AND STONY BROOK.

By Statute 1887, Chap. 428, authority was given to the city to discharge, by a new channel, the water of Stony Brook, increased by the improvements along the stream, into the Back-Bay basins.

This arrangement was, for reasons stated in the report of the Landscape Architect, unlooked for, and will require the adoption of means to *lessen* the damage likely to be caused by it.

It is, however, a subject of congratulation that the works

GRADING THE PLAYSTEAD.



of this Department were constructed on so liberal a scale as to be able to take in and discharge this increased volume of water.

The basin or basins were so constructed that the water could, at high tide, be kept at a level below the tide water, and thus be able to receive and store the water of freshets, without a rise in them sufficient to endanger the trees, shrubs, and banks.

This can no longer be done, but, as already stated, the danger of damage may be much lessened.

The report of the Commission on the "prevention of floods in the valley of Stony Brook" says:—

"It might be thought that the water in the pond might be kept at a lower elevation than that of the river, and that the pond might be used as a storage reservoir to receive the water of Stony Brook during freshets. Calculations based upon the area of the pond and the quantity of water which may flow during great freshets, after improvements have been made, show that the surface of the pond would rise faster than the tide, and that nothing could be gained in that way."

The same Commission, with reference to the outlet of the new Stony-Brook channel, says:—

"In deciding where to place the outlet of the new channel, we first notice that Charles River is nearly twice as far from the upper end of the proposed new structure as is the pond in Back-Bay park. It would be impracticable to build any new channel within or parallel to the park which would have as great capacity and require as little inclination as will that already furnished by the park pond. The available fall to

the park pond would be five feet, and to the Charles River would be but one foot more, or six feet. Consequently, a channel to reach Charles River, having less inclination, must be considerably larger, and, being nearly twice as long, would be more than twice as costly as one ending at the park pond."

The construction and opening up of the Back-Bay basins, and the Muddy-River improvement, into one great open channel, for sanitary and drainage purposes, is, as thus appears, to be credited with a large saving of the cost of the Stony-Brook improvement.

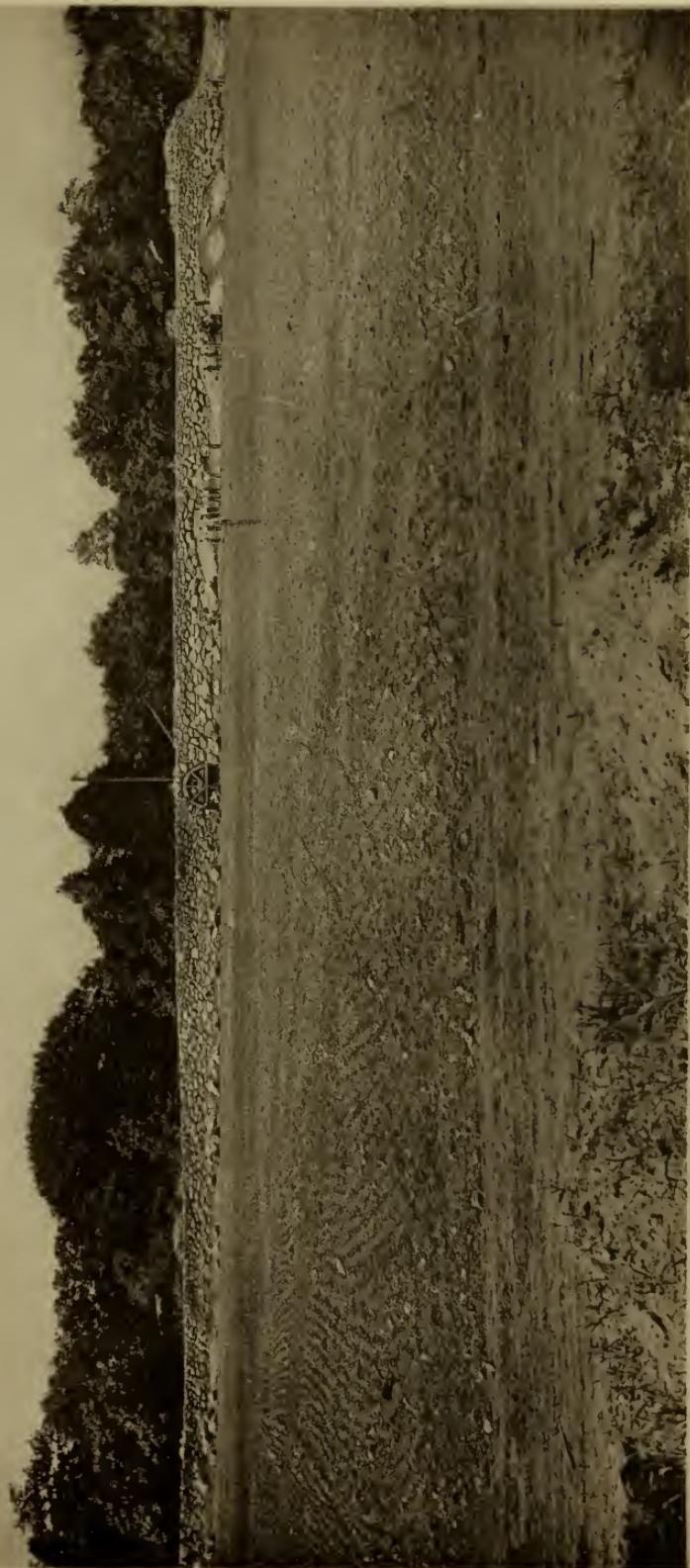
The saving in obviating the still greater cost of remedying the sanitary evils, inevitably otherwise to arise on the whole length of Muddy River, cannot be easily estimated.

The contemplation of the state of things, but for this improvement sure to exist in this valley, should lead all to assign the expense of this part of the park system rather to sanitary necessity than to the seeking of pleasure, however well calculated it may be to meet the desire for the latter, as well as the necessity for the former.

THE PARKWAY SYSTEM.

The name Back Bay formerly designating a large area of marsh-lands and flats, mostly under water, at the back of the town, continued attached to the locality after it had been filled and built upon, and is now generally applied to the whole district from the Providence Railroad and Arlington Street to Brookline. In this district Stony Brook and Muddy River, draining a large area of Roxbury, West Roxbury, Dorchester, and Brookline, emptied their waters into what was formerly called the full basin.

The nuisance which the use of these streams as a recepta-



THE STONE STRUCTURE OF THE OVERLOOK [Incomplete.]

cle for sewage had caused at their confluence in the full basin, and in the whole marshy region of the Back Bay, called loudly for a remedy. The City Government of 1877 made an appropriation for the improvement of these waste lands and flats (under the authority of the Park Act), to the extent of not less than one hundred acres, which, in the language of the order passed by the City Council, were to be "located with special reference to the improvement of the sewerage of the city."

The lands thus taken for sanitary and park purposes were required for a suitable outlet for the waters of these streams, and a basin for storing and controlling the excess of water in time of freshets, occurring with high tides. Only a narrow strip on the margins, reserved for street purposes, could be utilized for drives and promenades, while a cross-road and bridge for travel from one side to the other divided the basin into two parts. Not being a park in the proper signification of the word, it came to be called the "Back Bay Improvement," or simply "Back Bay." This name embraced the neighborhood, and is, therefore, not especially applicable or appropriate to the more limited area acquired by the Department for the above diverse purposes.

A later appropriation for continuing the improvement along Muddy River, with the purpose of making a continuous promenade from the Common to Franklin Park, added a new feature to the Back-Bay improvement which it did not possess standing alone, namely, that of a section of the great parkway contemplated by the plans of the Department. This view has been taken by Mr. Olmsted in his report on the nomenclature of the parkway system, which will be found annexed, and in the adoption of his suggestions by the following vote of the Board :—

IN BOARD OF PARK COMMISSIONERS, Dec. 30, 1887.

VOTED. — *First.* That the intended public promenade, being the continuous way designed to be formed with special regard to pleasure driving, riding, and walking between Boylston Road and Marine Park, by the way of Jamaica Pond, the Arboretum, and Franklin Park, together with the adjoining strips of territory intended to be improved by the Department, appurtenant to the promenade, be named as a whole, “The Parkway.”

Second. That different parts of the Parkway shall, as occasion arises, be given distinguishing names, all such names to terminate with the syllable “way.”

Third. That the local designations, Ipswich, Jersey, Rumford Longview, and Riverdale be discontinued.

Fourth. That the flooding-basins of the Stony-brook drainage system be called “The Fens;” its banks, “The Fenside;” the division of the promenade of the Parkway adjoining the Fens, “Fenway;” and the division of the promenade of the Parkway adjoining Muddy River, as far as Tremont Street, “Riverway.”

Fifth. That the territory of the Department lying between Boylston Road and Charles River be called “Charlesgate,” and the streets bordering the same, respectively, “Charlesgate East” and “Charlesgate West.”

There being no advantage in keeping under separate heads the accounts of these connecting park works, they have been united under the title, “The Parkway.” This plan, when the system is continued on to Jamaica Pond, the Arboretum, Franklin and Marine Parks, will simplify the accounts both of construction and maintenance, and will further emphasize the idea of the continuity of the whole.

CHARLESGATE.

Negotiations of long standing with the Boston and Roxbury Mill Corporation for the settlement of the suit growing out of the taking of its lands for the outlet of the Parkway at Charles River, and of the suits arising from the assessment of betterments, were resumed during the summer,

and resulted in a recommendation of this Board to the City Council, and the passage of the requisite orders to carry out the proposed arrangement.

The communication of the Board to the City Council is as follows:—

BOSTON, October 21, 1887.

To the Honorable the City Council of the City of Boston:—

Negotiations have long been pending with the Boston and Roxbury Mill Corporation for the settlement of its claim for land taken adjoining the sluice-ways of the Back-Bay basin, also for the settlement of the claim of the city for betterments, in both of which a final arrangement has now been arrived at.

The entrance to the Back Bay, of which the land taken from this corporation formed a part, was originally laid out three hundred feet in width. Subsequently the city acquired from the Boston Water Power Company two strips of land, fifty feet in width, bordering the entrance from Beacon Street to the Boston and Albany Railroad, thus widening the entrance between these points to four hundred feet. The negotiations with the Boston and Roxbury Mill Corporation have, therefore, sought the extension of the entrance at its full width of four hundred feet from Beacon Street to the river, and, by offsetting betterments and allowing the use of the additional land as public ways, this has finally been accomplished, subject to the approval of the City Council. An order for this purpose is appended.

The arrangement includes a release from the city to the Boston and Roxbury Mill Corporation of certain rights to construct sluiceways through the company's land under an indenture between the Mill Corporation and the Boston Water Power Company, dated May 9, 1832, and supposed to be acquired by the city in the taking of the Water Power lands. The present sluiceway renders other sluiceways unnecessary, and an order to authorize a release of the right to make them has been prepared and is submitted herewith. Both orders have received the approval of the City Corporation Counsel, and, as the arrangement only runs until December 1, early action is desirable.

Respectfully submitted,

BENJ. DEAN,
PATRICK MAGUIRE,
Board of Park Commissioners.

The orders, which will be found in the Appendix, were approved by the Mayor Nov. 21, 1887, and the transaction was finally completed within the time named.

In order to make the jurisdiction of the Board complete over all the roads within the Parkway, it was determined, after consultation with the Board of Street Commissioners and the Corporation Counsel, to take and lay out the parcels of land heretofore known as Ipswich and Jersey streets, and the continuations thereof to Charles River, as a public park, which was accordingly done Dec. 30, 1887. It is suggested that the planting of the areas reserved for planting in that part of Commonwealth Avenue lying between West Chester Park and Beacon Street be placed in charge of this Department, in order to insure uniformity of design and character.

CONNECTION OF THE PARKWAY WITH THE NEW BEACON-STREET IMPROVEMENT.

The improvement and widening of Beacon Street caused owners of land as well as the Park Commissioners to recognize the value of the connection between the two enterprises which finally led, early in the summer, to a proposition from the owners to give to the city free of cost a strip of land, 100 feet wide, from the circle on Beacon Street, near St. Mary's Street, to the railroad, together with the release of all grade damages, provided that the city would bridge the railroad and assess no betterments. Negotiations were opened with the railroad company which resulted in authority for the construction of the bridge. The lines of the Parkway were redrawn at this point to meet the new conditions, and negotiations for a considerable addition to the Parkway lands were closed. All the preliminaries having been arranged, on the 23d of last December the Board voted to purchase

these lands, and accepted the proposition for a gift of the strip named.

THE PARKWAY LANDS.

The inauguration of the Muddy-River improvement from Back Bay to Jamaica Pond called for an enlargement of that part of the Back-Bay improvement leading from Brookline Avenue to the Fens. The intended greater importance and usefulness of this outlet of the Fens made its widening a necessity. Immediately, therefore, after the Muddy-River improvement was determined upon, the City Government was applied to for an appropriation for said purpose. It is expected that early in the coming year the construction of this part of the improvement will be reached, and the revision of its outlines can be no longer delayed. The finishing of this work will open the Parkway from Beacon Street to Brookline Avenue.

The length of time that has elapsed since the Back-Bay improvement was commenced, and the rapid approach of costly buildings towards it on the easterly side, have created a great impatience for its completion,—not only among the owners of real estate in the vicinity, but the public generally.

The Board earnestly desires that the work may not be impeded for want of funds to purchase the necessary lands.

Purchases of the lands along Muddy River have from time to time been made, as opportunity arose for securing them at fair prices. The appropriation for this part of the parkway system being about one-half of the estimated cost of the lands, no complete taking could be made. The progress of the work of construction at Back Bay, and the necessity of providing early in the spring for the continued operation of the dredging machine, make an early taking necessary.

The last City Government petitioned the Legislature for

the passage of an act to authorize the city to issue a loan, outside the debt limit, for the payment of lands taken under the Park Act. This was intended to include lands already taken at Back Bay and Franklin Park, the appropriations made for which had been exhausted, as well as those intended to be taken to complete the Parkway to Franklin Park. The Committee on Cities of the Legislature, to which the matter was referred, did not consider the petition broad enough to include any lands not already taken, and, in consequence, a loan applicable only for the payment for lands already taken was authorized. The Board would urge the importance of another effort to obtain at once the funds sufficient to complete the taking of the larger part, if not the whole, of the Parkway from Back Bay to South Boston. It is desirable to fix the Parkway boundaries that owners of lands outside the locations may improve and develop their properties. It is estimated that about \$700,000 will be required for the purpose of completing the taking of the Parkway from Back Bay to Franklin Park. In former reports, particularly in that of last year, the Board has dwelt on the importance of immediately securing these lands. In the latter report, also, a map is published showing this part of the Parkway.

EXTENSION OF THE PARKWAY TO MARINE PARK.

The Board has previously called attention to the need of widening Columbia and Boston streets as a direct approach from South Boston to Franklin Park. A moderate widening of the street would afford a considerable measure of relief from the present inadequate conditions, but would fall far short of the great requirements of the future when the city will have grown up solidly about it. Ending at Dorchester Street, it would only make a partial connection between Franklin Park and Marine Park, and the difficult passage of South Boston would be a barrier to pleasure travel.



MARINE PARK — IRON PIER IN BUILDING.

The importance of the Marine Park to the system requires a more fitting and unimpeded connection with the other parks than this half-way plan provides. In looking for a feasible route for such a connection a glance at the map reveals the vacant south shore of South Boston, on a part of which Ninth Street has recently been built along the water's edge. Here is to be found over a mile of water-front almost entirely unimproved, having a southerly exposure and a fine near view of the harbor, which could be utilized, at small proportional cost, to make a most attractive drive and promenade, and, in connection with the Marine Park, one of the greatest pleasure resorts in the world. A connection could readily be made with Columbia and Boston streets, which, improved in like manner, would complete the circuit of the Parkway.¹

If it should be considered unadvisable to borrow the whole sum needed to take these lands at once, a part of the amount required, if appropriated and placed to the credit of the Department, would enable the Board to purchase such properties along the line as might be in the market, at about their assessed values, or could be obtained at favorable rates. This plan has, in the experience of the Board, been found to work well. In fact, in no instance has a taking been made before the Board had either bonded or purchased all the properties that could be had at what was thought fair values. It is estimated that \$300,000 will secure all the land required from Dorchester Street to the Marine Park, and if the proposition meet your approval it is recommended that that sum be appropriated for this section of the Parkway, and that the Board be authorized to take lands to that amount, by purchase or otherwise, as provided in the Park Act.

¹ See diagram on the map of the Back Bay Fens, printed with this report.

COST OF THE PARKWAY.

As the Board in carrying out its plans asks for more money for the purchase of lands, it desires to call attention to the fact that a very large part of the money, appropriated to and expended by the Department, would otherwise have been required and expended by other departments to serve necessary purposes. For instance, it will appear, in another part of this report, that the Back-Bay improvement saved the city the large expense of conveying the waters of Stony Brook by an expensive conduit to Charles River.

This improvement was constructed as a sanitary necessity, and but for it a large part of its cost would have to be expended in underground conduits and other necessary public works. The order making the appropriation for the improvement required roads to be made on all sides, which are also to be extended through the entire length of the Muddy-River improvement. These roads save the cost of other roads, which would otherwise have to be built at about an equal cost. The same may be said of Columbia Street, which requires widening for a suitable connection between Franklin Park and Marine Park. Some broad avenues, running in different directions from the city proper, are required to meet the public necessity and convenience. Columbia street is in a desirable position for one of such avenues, and should be liberally widened, whether parks are considered or not.

There is another consideration bearing upon the same question. It has been said that there is something almost providential in the good fortune of Boston in its parks. The large area of Franklin Park, so near the city, remained as farms until required for park purposes. Back Bay and Muddy River, a menace to the health of the city, will be converted from almost pestilential lonesomeness to a place of

MARINE PARK — IRON PIER IN BUILDING.



beauty and salubrity. The greater part of Columbia Street is still unbuilt upon, and can now be widened at comparatively little expense; and the south shore of South Boston is almost absolutely unoccupied, and of little value for commercial or other purposes.

As early as in 1882 it was shown in the reports of the Board that on the Back Bay the increase of assessed values, since the improvement was begun, were such that the increased taxes thus collected, added to the betterments, equalled the whole amount of the cost of land and improvements. The same result is found to-day, but to a greater degree, and it is safe to say that the operations of the Department, so far as they relate to the Parkway, do not tend to increase the rate of taxation in the city, but rather to diminish it, and this result will be augmented after construction ceases.

The Board thinks that it would be derelict in its duty if it did not urge to the utmost the purchasing, at this time, of the lands necessary for the entire system of parkways.

MARINE PARK.

An application was made to the last Legislature for the extension of the limits of the Marine Park to the location of the proposed reserved channel, north of East First Street.

The position of the proposed channel being still unsettled, it was agreed, with the Harbor and Land Commissioners, that the provisional line of northerly extension established by Chap. 360 of the Acts of 1885 should be relocated 300 feet farther north. A bill was reported, and authority to carry operations to this point was granted by Chap. 427 of the Acts of 1887, which will be found in the Appendix.

This was done with the understanding that, when the location of the reserved channel should be finally determined

upon, it should form the northern boundary of the Marine Park.

In December last the following petition, for the right to improve Castle Island for park purposes, was addressed to Congress : —

BOSTON, Dec. 2, 1887.

To the Hon. Senate and House of Representatives of the United States of America, in Congress assembled :

The City of Boston, by its Park Commissioners, is engaged in constructing a series or system of parks in said city, one of which, called the Marine Park, is at a place called City Point, near to and west of Castle Island, on which is located Fort Independence, said island belonging to the United States.

The plan of said Marine Park involves, if it can be carried out in full, — and this cannot be done without the consent and coöperation of the United States Government,— the use of said Castle Island or some parts thereof.

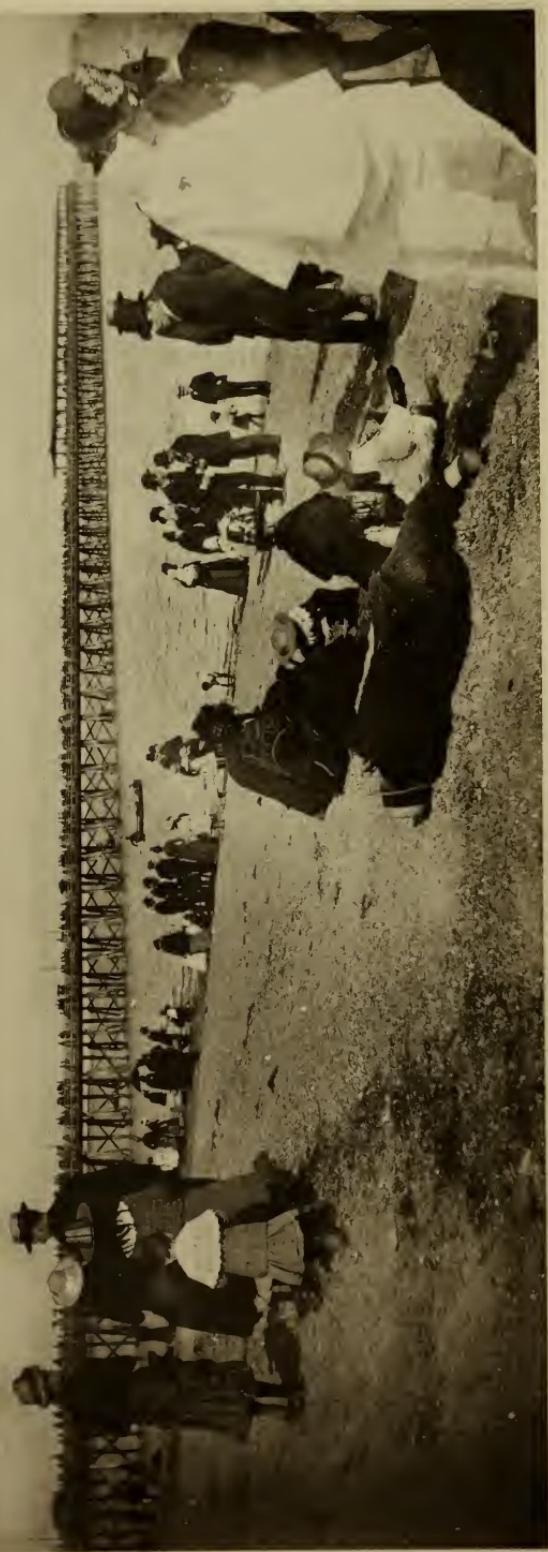
The undersigned, Park Commissioners of the City of Boston, respectfully represent that the portions desired to be used for park purposes will not injuriously affect the use of said island and fort by the United States for any of the purposes for which it was intended to be occupied ; and that the occupancy of the neighborhood of the island for park purposes will interfere with the use of the island and fort by the United States to a less degree than if used for mercantile or manufacturing purposes, which would otherwise be the case.

They further say that the use of the island for park purposes may be under such rules and regulations as the government may desire to make to secure its use for military or other national purposes, as occasion may require.

The annexed plan exhibits the contemplated Marine Park as designed, if the consent of the Government to the plan can be obtained.

Authority to construct said Marine Park according to said plan as far as the Commonwealth of Massachusetts is concerned has already been given by the Legislature of said Commonwealth as appears by the Acts and Resolves passed by the General Court of Massachusetts in the years 1885 and 1887, namely, Chap. 360 of the Acts of the year 1885, entitled "An Act in further addition to an Act for the laying out of Public Parks in or near the City of Boston," and Chap. 427 of the Acts of the year

MARINE PARK — TEMPORARY PIER.



1887, entitled "An Act to enlarge the Area for the proposed Marine Park of the City of Boston between South Boston and Castle Island," copies of which Acts are hereto annexed.

It is therefore prayed that the City of Boston may be authorized to construct said Marine Park so as to connect with said Castle Island substantially in the manner of said annexed plan, and may do such dredging and other works as may be necessary and proper to carry out the same.

CITY OF BOSTON, BY

BENJ. DEAN,
PATRICK MAGUIRE,
JOHN F. ANDREW,
Board of Park Commissioners.

This communication was forwarded to Hon. P. A. Collins, Representative to Congress from this district, together with the following suggestions for a draft of a proposed joint resolution : —

Joint Resolution authorizing the improvement of Castle Island in Boston Harbor owned by the United States.

Be it resolved by the Senate and House of Representatives of the United States of America in Congress assembled :

That permission be, and is hereby, granted to the City of Boston, in the State of Massachusetts, through its Park Commissioners, to improve and beautify Castle Island, situated in said city, and belonging to the United States, in connection with a public park to be laid out on land adjoining and connecting with said island, with the right to said City of Boston to make such excavations and fillings and erect and maintain such structures as the Secretary of War may from time to time approve: *provided*, that this resolution shall not be construed to pass any title in said island, but that the ownership and control of the said grounds shall remain entirely in the United States, and shall be subject to such changes and uses for military purposes as the Secretary of War may direct.

A precedent for the proposed action has been found in a joint resolution adding the grounds about Fort Porter to the park system of Buffalo. It is a similar case, except that

there a part of the fort was destroyed to make way for the "Park drive to the Front." The resolution is as follows:—

[No. 104.]

Joint Resolution authorizing the improvement of the grounds owned by the United States in the City of Buffalo, New York, known as Fort Porter.

Be it resolved by the Senate and House of Representatives of the United States of America in Congress assembled:

That permission be, and is hereby, granted to the City of Buffalo, in the State of New York, through its Park Commissioners, to improve and beautify the grounds known as Fort Porter, situated in said city, and belonging to the United States, in connection with a public park to be laid out on land adjoining the said grounds, the plans for the same to be approved by the Secretary of War: *provided*, that this resolution shall not be construed to pass any title in the said grounds, but that the ownership and control of the said grounds shall remain entirely in the United States, and shall be subject to such changes and uses for military purposes as the Secretary of War may direct.

Approved July 11, 1870.

The Marine Park has become a popular place of resort even in its rough and undeveloped state. The crowd of people who visit it and the temporary pier already justifies the building of the new iron pier.¹ It is a great resort on pleasant Sundays. As many as forty thousand have been estimated by the special officer in charge and others to have visited the park on some occasions. On one of the later days of the season photographs were taken, which are herewith reproduced, tending to show in how large a measure this pleasure-ground has taken hold of the popular fancy, and to what a great extent it is already conduced to the health and enjoyment alike of old and young. Its inestimable

¹ The winter photographs of the new iron pier in process of construction at Marine Park have been inserted, although taken since this report was prepared for publication.



MARINE PARK — TEMPORARY PIER

value to young children can hardly be appreciated even by those acquainted with these facts. Weekly reports by the matron in charge of the room devoted to the use of mothers and children tell of the beneficent influence already exerted by the park, and which will operate to the benefit of a greater number in the future. A brief statement of the number of visitors on some Sundays and week-days, as noted by the special officer on the park, will be found in the appendix.

CHARLES RIVER EMBANKMENT.

In its last Annual Report the Board called attention to the importance of securing the Charles-River basin from the possibility of its use for commercial or other than ornamental purposes, and suggested that legislation should be directed towards this result.

ZOOLOGICAL GARDENS AND AQUARIA.

In Mr. Olmsted's "Notes on the plan of Franklin Park," which appeared as supplementary to the Eleventh Annual Report of this Board, a division of the park, named on the plan "Long Crouch Woods," from the colonial name of the adjoining road (now Seaver Street), was indicated as "to be held subject to lease to a suitable organization for a zoölogical garden."

This suggestion was taken up by the Boston Society of Natural History, and resulted in the following communication from a committee of the council of the society, in regard to establishing zoölogical gardens and aquaria in the public parks, which was received by the Board September 16th last, and was referred to Mr. Olmsted for suggestions for a reply:—

To the Honorable the Park Commissioners : —

The Boston Society of Natural History has long had in view a considerable extension of its public service, and now begs leave to lay before the Park Commissioners an outline of its plans for the immediate future, in which it respectfully asks for their coöperation.

The Museum of the Society, established in 1830, and now open to all (free at certain times, and at others by payment of a small fee), has been built up from the first with special reference to the public benefit, and with the distinct understanding that it shall be forever auxiliary to the general scheme of public state and municipal education. Within the last score of years it has still further developed the idea by establishing a special "*New England Collection*" of animals, plants, and minerals; and, while abating in no respect the privileges of the general public, has secured by private munificence, the close contact with the Museum and its collections, of hundreds of the public-school teachers of Boston and vicinity, by means of practical exercises (with specimens of considerable value given away to all), and instruction under the ablest direction, on successive Saturday afternoons.

The Society is anxious, however, to do still more, and therefore invokes the aid of the Park Commissioners in a scheme which will enable it to offer to the people of Boston opportunities at present wanting in all New England, viz. : —

By a system of zoölogical gardens, aquaria, etc., to offer opportunities to observe, under conditions as nearly natural as possible, the broad features of the animal and plant life of this country. Furthermore, the plan calls for attention, primarily and especially, to the fauna of New England, both land and marine, including its indigenous quadrupeds, birds, reptiles, fishes, mollusks, crustacea, etc., under conditions — not too restricted — such as will facilitate public observation of their habits, their native environment, their behavior at different times, their breeding peculiarities, and the rearing of their young.

The urgent need of such opportunities is proven by the fact that nowhere nearer than New York City can anything of the kind proposed be found. And it is to be borne in mind that, with the increase of population, and the concomitant decrease of the indigenous wild animals, above all with the modern excessive growth of city life, the percentage of city children (and hence of all) who may ever hope to see, and still less to observe at their leisure, the living objects of their native state or country is rapidly diminishing. At the same time the importance of such observation and study, instead of decreasing in like proportion, is

greatly enhanced. To the country boy it is of comparatively little moment whether he observes this bird or plant, or that, since he has usually definite ideas of all, drawn from frequent observations of many. But to the city lad it is of the utmost consequence that he shall be able to correct his less definite ideas—formed for the most part by hearsay, by books, or by pictures—by observation of the object itself.

Second only to its educational importance is the value of the scheme in supplying to all classes an outlet for their natural and praiseworthy curiosity, a vast store of innocent and healthy amusement, and never failing recreation and diversion such as natural-history gardens and aquaria always offer.

It appears, therefore, to the undersigned, that it is not only eminently fitting and proper, but even imperative, for the metropolis of New England to promote the establishment and control of zoölogical gardens, aquaria, etc., by the Boston Society of Natural History, since these will certainly not be duplicated in New England, will be in trustworthy hands, giving them an acknowledged scientific character; and, being unique in New England, will be resorted to by visitors from far and near.

Any such plan demands at the start a considerable area of land within easy distance of the thickly inhabited parts of the city. No land of sufficient extent has been found in the vicinity of Boston, at all available for such a purpose, excepting what is under the charge of the Park Commissioners, and it is for this reason that the Committee brings these plans to their attention.

It is the purpose of the Society, if the Park Commissioners shall express their approval of the general plan (which the Committee will lay more fully before them, if desired), and shall signify their readiness to place in the charge of the Natural History Society such parcels of land as may be available and suitable for the purpose, to lay these out in an attractive manner, to stock them with animals, and to establish aquaria for such creatures as inhabit the adjacent fresh and salt waters, with basins of considerable size for the larger marine animals; and, eventually, to furnish the visitor with such guides as will enable him to understand easily the objects he is to see.

Furthermore, the Society stands ready to open the grounds and aquaria to the public at certain times free, on reasonable conditions, reserving only the right to provide for the proper maintenance of the establishment by charging an admission fee at other times. It is in no way intended to inaugurate or carry out the plan as in any sense a

commercial enterprise, but only to insure its perpetual support and improvement by appealing to a natural and healthful interest in living objects. The Committee is confident that the general plan must commend itself to the Park Commissioners, not only as legitimately within the scope of their powers, but as fully accordant with the purposes for which the parks were established by the city, and in no small measure supplementary to the plans already undertaken for entertaining and instructing the people.

(Signed)

M. D. ROSS, *Chairman,*
 H. P. BOWDITCH,
 THOS. T. BOUVÉ,
 JOHN CUMMINGS,
 ALPHEUS HYATT,
 EDWARD BURGESS,
 WM. T. SEDGWICK,
 SAM'L H. SCUDDER, *Sec'y,*

*Committee of
 the Council of the
 Boston Society
 of
 Natural History.*

BOSTON, Sept. 12, 1887.

(Dr. C. S. Minot, the other member of the Committee, is absent in Europe.)

On September 30th the Board sent the following reply :—

BOSTON, September 30, 1887.

To MESSRS. M. D. ROSS, H. P. BOWDITCH, THOS. T. BOUVÉ, JOHN CUMMINGS, ALPHEUS HYATT, EDWARD BURGESS, WM. T. SEDGWICK, CHAS. S. MINOT, and SAM'L H. SCUDDER, *Committee of the Council of the Boston Society of Natural History :*—

GENTLEMEN,—The Park Commissioners are glad to learn, from your communication of the 12th inst., that the Boston Society of Natural History is inclined to extend its present means of usefulness by providing and maintaining collections of living animals, and that, preliminary to the preparation of a definite scheme for the purpose, it wishes to be informed of the views of the Commissioners on the subject.

The Commissioners have considered that such collections are a part of the proper scientific and educational equipment of a modern city; that, as customarily made in the form of zoölogical gardens, a considerable body of land is required; that the difficulty of obtaining suitable

land, conveniently situated, has hitherto been the principal obstacle to a satisfactory scheme for providing them for Boston.

The Commissioners have learned that the larger number of existing collections of the class in view have had their beginning, at least, in societies, formed for the purpose of establishing them, on the footing of joint-stock commercial undertakings.

Originating with a few active naturalists, or men of special tastes, a large element of the success of these enterprises is understood to lie in the extensive distribution of their stock among all classes of the people of the towns benefited. Ghent, for instance, when its zoölogical garden of thirteen acres was begun had less than a third of the population of Boston, and was slowly recovering from a great lapse from its earlier prosperity in trade; but the society taking up the scheme soon numbered four thousand stockholders, the greater number of whom became active agents in securing the success of the undertaking. The society at Antwerp bought land in 1843 with a capital, raised in the same manner, of \$20,000. In a few years it was able to buy additional land, and from time to time since has enlarged its operations, the latest important addition to its plant being an extensive and exceedingly interesting and beautiful aquarium. Members of this society pay an initiation fee of four dollars, and an annual fee of five dollars. The charge for admission to the garden for others than members is twenty cents.

Another class of such collections is established and supported by funds drawn from public treasuries, administered directly by agents of government, much as are the funds for the public library and for public schools in Boston. The collection connected with the Jardin des Plantes in Paris, and that in a corner of the Central Park of New York, are of this class.

A third class are managed by private corporations upon land leased to them by governments, at a nominal rent, on certain conditions. These conditions are, usually, the admission of the public to the collections on certain days of every week at a stipulated low charge or without charge, the free admission at certain other times of students and artists, and some guarantee that the proper scientific and educational objects of the collection shall not be sacrificed to considerations of immediate popularity and financial prosperity. Of this class, which may be termed that of the mixed method, are well-known examples in Paris, London, Dublin, and Philadelphia. The leased land has been generally a part of an old government forest, or of unproductive crown

properties near the city. In no case known to the Commissioners has land taken from private possession by a city for a park been used for the purpose. The land of the Philadelphia zoölogical garden, though nominally taken for a park, was really acquired by the city as a part of a series of measures for guarding its water supply.

The Park Commissioners will stand opposed to any scheme under which the City of Boston would follow the example of New York in undertaking the direct management of a zoölogical collection. It is the conviction of the Commissioners that the more nearly the Department of Parks is limited to the definite duty of providing the people of the city with opportunities simply of rural recreation, unmixed with other methods of recreation, and of guarding the means under its control for this purpose from being encroached upon in efforts to further other ends, the better will its funds be administered and the public served.

As to the independent joint-stock company method of proceeding, it is to be preferred in the judgment of the Commissioners only upon two conditions: First, that the corporation shall be so constituted that the object of a trivial popular success — a success of the order of a circus or travelling-show corporation — shall be permanently held subordinate to that of promoting scientific investigations, scientific instruction, and sound recreative popular education in Natural History. Second, that the corporation shall be able to procure and hold land suitable to all the requirements of health and the satisfactory display of its intended collections, in sufficient quantity and conveniently situated.

With regard to this latter condition the Park Commissioners consider that Boston presents circumstances of unusual difficulty. Its territory is greatly divided by bodies of water and marsh and its dry land by rocky ridges. Growing rapidly, the city is for this reason extending itself in a very scattered way: ground naturally adapted to be built upon in its suburbs being seized upon and occupied much in advance of the spreading area of compact blocks. It is improbable that a corporation seeking to establish a zoölogical garden of the ordinary type could now obtain a satisfactory situation for it except at a price constituting a financial burden upon the enterprise too heavy to be carried. There has been nothing corresponding with the conditions of Boston in this respect in the old Dutch and Flemish towns where the independent and popular joint-stock corporation method of obtaining zoölogical gardens has had its greatest success. At the same time the Commissioners suggest that in turning to the mixed method the advantage which has been secured in these cases by gaining the active coöperation of a large number of small stockholders should not be lost sight of.

The Commissioners having in view the considerations that have been recited, drawing to the conclusion that only by the method in which the city would provide land to be occupied at a nominal rent for a series of years to a suitable corporation is the end in view likely to be accomplished, have been led to reflect as follows: (1.) As it is much better in a matter of this kind that a limited undertaking should be carried out with artistic completeness, finish, and moral effect, than a much broader undertaking in a poor, mean, makeshift, dragging, and slovenly way, adequate precaution against the city's becoming committed to any enterprise liable to be of the latter character is the first duty of those who act in its behalf. (2.) A primal condition of high success at reasonable cost in a collection limited to almost any division of the animal kingdom is that the ground it is to occupy shall be specially suited to it. (3.) Examining all the territory under their supervision which could be considered available for the purpose, the Commissioners have been satisfied that all the conditions which would go to make up a perfect site for a complete zoölogical garden exist nowhere in convenient association. For a considerable part of a complete collection such conditions are to be found upon the twenty acres of land which the Commissioners have placed in reserve at the north end of the outer division of Franklin Park. Because of its sheltered south-western exposure, its excellent drainage, its fine local natural features, its charming distant outlook, its position relatively to the most popular features of the intended park, its situation between the park and the central parts of the city, and its accessibility,—it is an ideal site for the more popularly interesting elements of a limited collection such as is suggested in your communication; but for a complete zoölogical garden it is far from being all that is to be desired.

Pursuing the general line of reflection thus suggested, the Commissioners have seen that there must be a question of the balance of advantages between an attempt to bring together on one piece of ground all collections which the city should undertake to promote, or to provide for a division of them. The drift of the Commissioners' judgment heretofore has been toward the conclusion which appears from your communication to have been independently approached by the Society of Natural History, and they have accordingly had provisionally in view, in addition to the reservation already made north of Franklin Park, two others. One of them would be upon the seashore at City Point, and would supply not only a site for an aquarium of the ordinary type found in the largest zoölogical gardens of Europe, but an arm of the sea, perhaps

quarter of a mile in length, the waters of which, though enclosed, would be moved by the flood and ebb of the tide. The other would be a part of the valley below Jamaica Pond, in which there would be an abundance of flowing fresh water and all desirable advantages for rivulets and pools, forming suitable breeding places for aquatic birds and other desiderata.

Realizing the disadvantages of such a division, the Commissioners have, nevertheless, considered that experience has shown it not to be impracticable; that there are, for instance, successful aquaria in Europe that have been established independently of general zoölogical gardens, and that there are zoölogical gardens containing no aquaria; and that the Ornithological Society of London for many years maintained a collection of certain classes of living birds, larger, finer, and better displayed than those of either of the two general zoölogical gardens.

The Commissioners have considered that it might be an open question whether a separate organization for each of the suggested divisions would be desirable rather than a single corporation, but will regard it a fortunate circumstance if the Natural History Society is prepared to undertake the entire business on a sufficiently strong basis.

The Commissioners believe that they have thus sufficiently defined their position, but in conclusion desire to emphasize two points:—

First, in any negotiation in which they may engage in behalf of the city looking to a lease of lands for the purpose in question, the Commissioners will wish to have before them a well-defined plan of what is to be undertaken, with evidence that the proposed lessees are prepared to carry it out and sustain it in such a manner that, whether little or much is set about, the result shall surely be, of its kind, inferior to none.

Second, it should be clearly understood that the funds now at command, or prospectively at command, of the Commissioners, are to be used for carrying out schemes of improvement which had been adopted before the city was authorized to obtain these funds. The preparation of ground for zoölogical collections was no part of these schemes, and the Commissioners will entertain no proposition looking to a diversion of its present means to that purpose.

BENJ. DEAN,
PATRICK MAGUIRE,
Board of Park Commissioners.

To which the Committee of the Council of the Boston Society of Natural History made the following reply:—

To the Honorable the Park Commissioners of the City of Boston:—

GENTLEMEN,—The Committee of the Council of the Boston Society of Natural History begs leave to acknowledge the receipt of the courteous and suggestive reply of the Park Commissioners to its communication, and to express its thanks for the same. The Committee fully concurs with the Park Commissioners in considering the plan of municipal responsibility pure and simple, alike for foundation, maintenance, and administration, entirely opposed to the welfare both of this municipality and of the undertaking itself. It concurs also in regarding the purely joint-stock corporation plan as undesirable, partly because of the intrinsic tendency of such a corporation to sacrifice the higher aims of such an institution to temporary financial success, but especially because, as pointed out by the Park Commissioners, such a corporation would probably be fatally handicapped at the start by the enormous cost of suitable and sufficient areas of land. Moreover, the Committee would regret to see any undertaking of this sort based upon the expectation of pecuniary returns to stockholders, and does not think it would meet with commendation from the citizens of Boston. In brief, the method suggested by this Committee in its first communication to the Park Commissioners,—namely, the use of public lands at a nominal rental, and in return therefor grants of free admission to the public on certain days, as well as special privileges, when practicable, to teachers of public and private schools accompanied by their classes, with the excellence of the collections and the efficiency of the administration guaranteed by the character of the controlling organization,—seems to the Committee the most suitable to adopt at the outset of this new undertaking, which, though different in character, is nevertheless to be devoted to the same objects as the Society's present museum, namely, the instruction and recreation of all classes of citizens.

The Committee, however, fully realizes the importance of attaching to the enterprise a much larger number of our citizens than the Society itself now includes; and to this end it proposes to create a special class of members, to be called "Natural History Garden Members," thus carrying into effect one of the important suggestions of the Commissioners, "that, in turning to the mixed method, the advantage which has been secured in these cases [establishments of a similar kind], by gaining the active coöperation of a large number of small stockholders, should not be lost sight of."

It appears to the Committee that this "mixed method," so called, is the only one by which it is possible for the city of Boston, for a very long

time to come, to be supplied with the healthful amusement and instructive recreation which consist in the observation or study of animals kept under their natural conditions, and arranged, classified, and described with scientific exactitude. From this point of view, and in accordance with the request of the Park Commissioners for a more exact and detailed statement of its plans and resources, the Committee is prepared to recommend to the Boston Society of Natural History to enter upon a system of coöperation with the Park Commissioners, for the establishment of a Natural History or Zoölogical Garden. But before any plan can be finally adopted by the Society, it is necessary that it should be put in a definite form, and in that form receive the approval of the Council, and also that of the Society at large. The Committee, therefore, feels constrained to request the Park Commissioners to say whether they are prepared to rent to the Society, for a nominal sum, certain areas of land under the control of the Commissioners, as already suggested by them; to wit, that portion of Franklin Park lying on the city side of Playstead and the Greeting, excepting Sargent's Field. This area would probably be large enough for the Natural History or Zoölogical Garden proper, and would require to be supplemented hereafter only by much smaller areas for special purposes,—such as breeding-ponds for aquatic animals, for which the region below Jamaica Pond, referred to by the Commissioners, would answer; and salt-flats and large water-basins for marine aquaria, for which the areas at City Point, described by the Commissioners, would be eminently suitable; and, probably, for some special purposes, some water space in connection with the park in East Boston. The leasing of these areas is to be upon the express condition that the friends of the Society shall raise the sum of \$200,000 as a fund to guarantee the proper maintenance of the proposed Natural History Gardens; and shall also secure, for the Gardens, the advantages of the joint-stock corporation plan by enlarging the membership of the Society, through the admission of "Natural History Garden Members," in order to gain the moral and financial coöperation of a thousand or more persons constituting a large and influential portion of the community; and, furthermore, that the Society shall assume all the burdens of the organization, equipment, and support, of whatever kind, entailed by the undertaking of a first-class Natural History Garden. It is also to be further understood that the action of the Society is to be guided by the principles urged by the Commissioners, and heartily agreed to by the Committee, that "it is much better in a matter of this kind that a limited undertaking should be carried out with completeness, than a much broader undertaking in a mean and makeshift way."

If the Society enters upon this agreement it is to be also further understood that it will lay before the Commissioners, within a reasonable time, "a well-defined plan of what is to be undertaken, together with evidence that the Society is prepared to carry it out and maintain it in such a manner that the result of whatever is undertaken shall surely be, of its kind, inferior to none."

The Committee requests the Commissioners to state whether the proposals above made meet with their approval.

M. D. ROSS, *Chairman,*
 H. P. BOWDITCH,
 THOMAS T. BOUVÉ,
 JOHN CUMMINGS,
 ALPHEUS HYATT,
 EDWARD BURGESS,
 WM. T. SEDGWICK,
 CHARLES S. MINOT,
 CHARLES W. SCUDDER,
 F. W. PUTNAM,
 SAMUEL H. SCUDDER, *Sec'y,*

Committee
of the
Council of the
Boston Society
of
Natural History.

By
 (Signed) SAM'L H. SCUDDER,
Secretary.

BOSTON, Dec. 3, 1887.

Upon receiving the above communication, the Board passed the following vote, which has been sent to the Committee of the Council of the Boston Society of Natural History :—

IN BOARD OF PARK COMMISSIONERS,

December 30, 1887.

Voted, That the Board of Park Commissioners has received with pleasure the proposition of the Committee of the Council of the Boston Society of Natural History, for the establishment of Natural History Gardens in the public parks, and assures said society that it shall have reasonable facilities for its undertakings; and that when said society shall have

raised the guarantee fund of \$200,000, and performed the other things set forth in said proposition, then this Board will give what authority it has to said society to occupy lands at Franklin Park, and in the Parkway below Jamaica Pond, and at Marine and Wood Island Parks, at a nominal rental, to enable said society to carry out its purposes of establishing Zoölogical Gardens and Aquaria; and if such authority be not deemed sufficient, the Board will apply to the Legislature for authority to make such arrangements with said society as will enable it to carry out its plans substantially as set forth in said proposition, and such as may be hereafter mutually agreed upon; which arrangements, so long as said society shall comply with the conditions thereof, shall be exclusive; reserving however, in all such agreements, the right of this Board to determine all questions as to said facilities so far as they relate to the laying out and occupying of said grounds.

BOSTON HARBOR.

On the 13th of last May the Board received the following communication :—

BOSTON MEMORIAL ASSOCIATION, Inc. 1880.

BOSTON, April 30, 1887.
[Arbor Day.]

To the Hons. BENJAMIN DEAN, PATRICK MAGUIRE, JOHN F. ANDREW,
Park Commissioners :—

GENTLEMEN,—The Boston Memorial Association respectfully calls the attention of the Boston Park Commissioners to the importance of restoring the islands in the harbor to their original beauty by the judicious formation of plantations of trees.

Many of these islands are owned by the City of Boston, and several by the United States Government.

Their present condition is one of almost entire barrenness, and the soil of some of them, at least, is well adapted to a growth of trees.

Would it not add very much to the beauty of the harbor if they could be properly planted; and is it not practicable for the City of Boston, or for private enterprise, or for both combined, to begin on some plan either permanent or experimental, with the above end in view?

The Boston Memorial Association has full confidence in the capacity,

resources, and experience of the Boston Park Commission to consider and answer the above questions, and earnestly hopes that the matter may receive its careful attention.

In behalf of the Boston Memorial Association, and by order of its Executive Committee.

Respectfully,

(Signed) M. P. KENNARD,

President.

HENRY F. JENKS,

Secretary.

The communication was referred to the Landscape Architect to report on the feasibility of re-foresting the islands, and for suggestions as to the best method of carrying out the undertaking. Several trips to the islands were made by members of the Board, accompanied by Mr. Olmsted, and on some of them by Mr. M. P. Kennard, President of the Boston Memorial Association, Mr. Jos. Story Fay, and Mr. Augustus Russ, to the latter of whom the Department is under obligations for the use of his steam-yacht. Mr. Fay's experience in tree-planting is referred to in the report of Mr. Olmsted to the Department. At the suggestion of Mr. Olmsted an opinion of the proposed undertaking was obtained from Mr. Robert Douglass, who has had a larger experience in this direction than any other man in the country. He attested his conviction of the likelihood of success by offering to undertake the work under contract, his compensation to be conditional upon the results obtained. This offer, which is given more fully in Mr. Olmsted's report, indicates approximately what can be accomplished if the City Council should think well of intrusting the Department with this enterprise. The Board has been assured of the coöperation and assistance of the departments having the direct charge of islands owned by the city and their willingness to

assist in the planting of such of the lands under their respective jurisdiction as could be spared for the purpose, the direction and control of the work to be in the hands of this Department, in order that a uniform policy may be pursued, and consistent results anticipated.

It is recommended, if the matter receive your favorable consideration, that annual appropriations of \$5,000 be made for six years, and that the Board be authorized to make contracts, extending over that period, for the planting of so much of the surfaces of the islands as may be placed at its disposal by the city departments having the custody of the same, and by the United States government; also, that the Board be authorized to supply to owners of private lands, within or on the harbor, suitable stock for plantations, or to contract for making such plantations at cost, all money so received to be credited to the appropriation; also, that the Board of Directors of Public Institutions, and Board of Health, be requested to extend such aid as may be in their power to the work of planting so much of the islands under their charge as may be available for the purpose.

The beauties of the islands and capes of Boston Harbor, even in their present bare and almost treeless condition, have received the favorable comment of strangers as well as of citizens. How much more would be their power and effectiveness if these counsels and action are adopted! Mr. Olmsted's report on this and other important matters of general popular interest will be found in the Appendix, together with a chart, and a description of the bay and harbor compiled from the "Atlantic Coast Pilot," which are here printed for convenient reference.

PLAYGROUNDS.

April 26, 1887, the Board received the following order:—

CITY OF BOSTON,
IN COMMON COUNCIL, April 14, 1887.

Ordered, That the Board of Park Commissioners be requested to report upon the cost and advisability of establishing a suitable playground of five or six acres, for boys and athletic clubs, on the waste land west of Boston Street, or between Dorchester Avenue and the Old Colony Railroad, and north of Mt. Vernon Street, or upon the Cow Pasture. Passed. Sent up for concurrence. In Board of Aldermen, April 18, concurred. Approved by the Mayor, April 21, 1887.

A circular letter containing the purport of the order, inviting propositions from owners to sell lands for the purpose, was prepared May 10, and sent to all persons owning one or more acres in the localities named. The only complete proposition was received from the Trustees of Estates of James C. Ayer, Francis B. Hayes, and Arria Cotton, for $3\frac{5}{100}$ acres, $1\frac{6}{100}$ acres, and $\frac{7}{100}$ acres, respectively, for 20 cts. per square foot, a total area of six acres, including $\frac{3}{100}$ of an acre belonging to Kate Marcus. This property lies between Dorchester Avenue and the Old Colony Railroad, and between Kemp and Locust streets. The dimensions of the lot are 440 feet on Kemp Street, by 594 feet in depth. It is rectangular in shape, and at marsh grade. The cost of the lot at the price named by the owners would be \$52,272. The site is well adapted for the purpose, and is about in the middle of the whole area indicated in the order. No other definite offers of a suitable area were received, although it was intimated by some of the owners of vacant lands on the Cow Pasture that, if the Board were in a position to accept such a proposition, a sufficient amount of these lands could be offered to the City at a reasonable price; one part-owner of several detached lots in this locality, none over three acres in extent, offered to sell at the rate of ten cents per square foot, which he stated would also be accepted by the other owners.

Several petitions for the laying out of small pleasure-grounds in various parts of the city were presented to the last City Council and referred to this Board. Two were from James H. Stark, requesting that the summit of Savin Hill, consisting of about ten acres, be set apart and placed in charge of this Board for park purposes, and that any further encroachment on the same by buildings be prevented, and setting forth that the inhabitants of Dorchester possess a valuable franchise or easement in said hill under the conditions of the grants made in 1636 and 1638, as per Dorchester town records, pages 24 and 40. The hill at that time was known as Rocky Hill, and later as Old Hill. The question of public rights in the hill was referred to the corporation counsel, who made the following reply :—

CORPORATION COUNSEL'S OFFICE,

BOSTON, June 30, 1887.

HON. BENJAMIN DEAN, *Chairman Park Commissioners* :—

DEAR SIR,—Having reference to your letter of the 25th ult., I have had the title to Savin Hill examined, and I am satisfied that the City has no rights therein, or that the public have no rights therein which would materially affect its value or the question of the acquisition thereof for park purposes.

Very respectfully,

E. P. NETTLETON,

Corporation Counsel.

A petition from Henry L. Pierce and sixty-one others, residents of Dorchester, that the ground known as Vose's and also as Baker's Grove at the Lower Mills, with additional land for a playground, be purchased by the city, was referred to this Board April 27. The Board visited the place and consulted with some of the owners. At the suggestion of the Board a proposition was made by the owners, on Dec. 2, offering about eight acres for \$33,117.91,—an average of

about ten cents per square foot, though one of the owners is ready to sell at about half that price, to further what he esteems a public benefit.

A petition from J. A. Hathaway and six others, residents of Brighton, asking that the grove at North Brighton, known as Stone's Grove, be purchased and set apart as a small park and playground for children, was referred to this Board on May 9. No estimate has been made of the probable cost of this project.

In the late inaugural address of His Honor the Mayor, and also previously in a special message to the last City Council, attention was called to the large amount of vacant lands and other properties not used by the city, which he recommended to be sold. Reference was made to some of these lands in the "Notes on the Plan of Franklin Park and Related Matters," supplementary to the Eleventh Annual Report of the Board, and a map showing their locations was published. Demands for playgrounds for the youth of the city are frequently made, which have been partially met in the past by hiring lands in different parts of the city. Might not some of these vacant properties, if found suitable and convenient for playgrounds and for open-air gymnasiums, be appropriated for such purposes, and might not others, not well situated or of insufficient area, be sold and the proceeds applied to the purchase of more suitable lands? If this can be done, and the whole matter of playgrounds be referred to this Board for action or for examination and report, it will cheerfully undertake the duty.

Respectfully submitted,

BENJAMIN DEAN,
PATRICK MAGUIRE,
JOHN F. ANDREW,

Commissioners.

BOSTON, Jan. 27, 1888.

APPENDIX.

REPORT OF THE LANDSCAPE ARCHITECT ADVISORY.

The Honorable BENJAMIN DEAN, Chairman of the Board of Commissioners of the Department of Parks:—

SIR,—In reviewing the operations of the Department during the last year, certain circumstances should be regarded that are not likely to recur. First, the City Councils had the previous year obliged all the works of the Department to be abruptly stopped, the forces employed to be disbanded, and the machinery to stand idle. Second, work was not resumed until after an unprecedented demand had been established for all classes of service required by the Department; contractors were loaded with engagements; no contract for park work could be made except at greatly advanced prices, and those taking contracts found it impossible to meet their obligations because suitable workmen could not be hired. Third, the force employed by the day has been agitated at frequent intervals by projects for securing higher wages or for giving less work for given wages. Fourth, notwithstanding a large advance of wages, it has been evident that many men have entered the service of the Department with no care to remain in it, and so many have been falling out that to the end of the season the force has had to be constantly and largely recruited with raw hands.

Taking these adverse circumstances into account, it is thought that the amount and quality of the work accomplished at all points should be considered satisfactory. There has been no departure from the general plans set forth in the past annual reports of the Department; but in Franklin Park, where much obstructive rock has been found below the surface, making difficulties of construction, there has been a good deal of elaboration and adjustment of details of the design.

Reports, which it may be thought desirable to append to the annual report of the Department, will be presented below upon a number of matters of public concern.

I.

THE IMPROVEMENT OF BOSTON'S ADVANTAGES AS A SUMMER RESORT.

Your Board has heretofore considered some aspects of this subject, and important operations are now in progress as the result of its deliberations, but the communication addressed to it last Arbor Day by the Boston Memorial Association, upon which a report has been asked, has obliged an inquiry to be made of broader scope than has hitherto been thought necessary.

Between the wharves of Boston and the sea, outside of Boston Bay, there are seventy-five islands and islets, fifty notable projections of the main-land with bays between them, some of which are the mouths of streams, and a great many shoals and reefs which are exposed, or upon which the sea breaks, at low water. Between all these there are innumerable sub-channels more or less navigable,

according to the stage of the tide and the depth of any object to be floated through them. The rise and fall of the tide varies from eight to sixteen feet, according to the age of the moon and the condition of the weather, and the tidal currents are liable to be strong and complicated. These circumstances not only make the harbor interesting because of what meets the eye of those passing through it or along its shores, but they give fleet, nimbly-turning boats a more marked advantage than they would otherwise have, and make close calculations and tact in trimming and steering them of more obvious importance than they are in harbors with fewer elements of picturesque character. Add to this the further consideration that from the time of the first settlers the people in Boston have been much engaged in fishing ventures, not only on the deep sea, but of a class to be pursued with boats of light burden, and the fact will be accounted for that there has always been an unusual interest among them in the modelling, building, rigging, and seamanship of small craft, both for commercial and for recreative use.

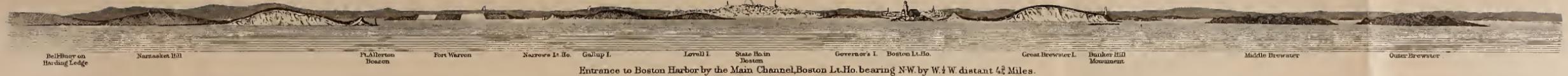
The city government has recognized this interest, and, in an exceptionally systematic way, wisely fostered it by the institution of an annual regatta with prizes to winners from the public purse. Latterly, at the suggestion of your Department, it has begun the building of a promenade pier, providing a fair outlook upon the harbor, and of a large basin especially as a mooring-place for pleasure-boats. With a possible exception in Venice, it is believed that the people of no other city in the world make as much or as good use of their harbor, otherwise than commercially, as those of Boston have been long accustomed to do, and that none take as much or as justifiable pride in the character of their small craft, and their dexterity in handling them.

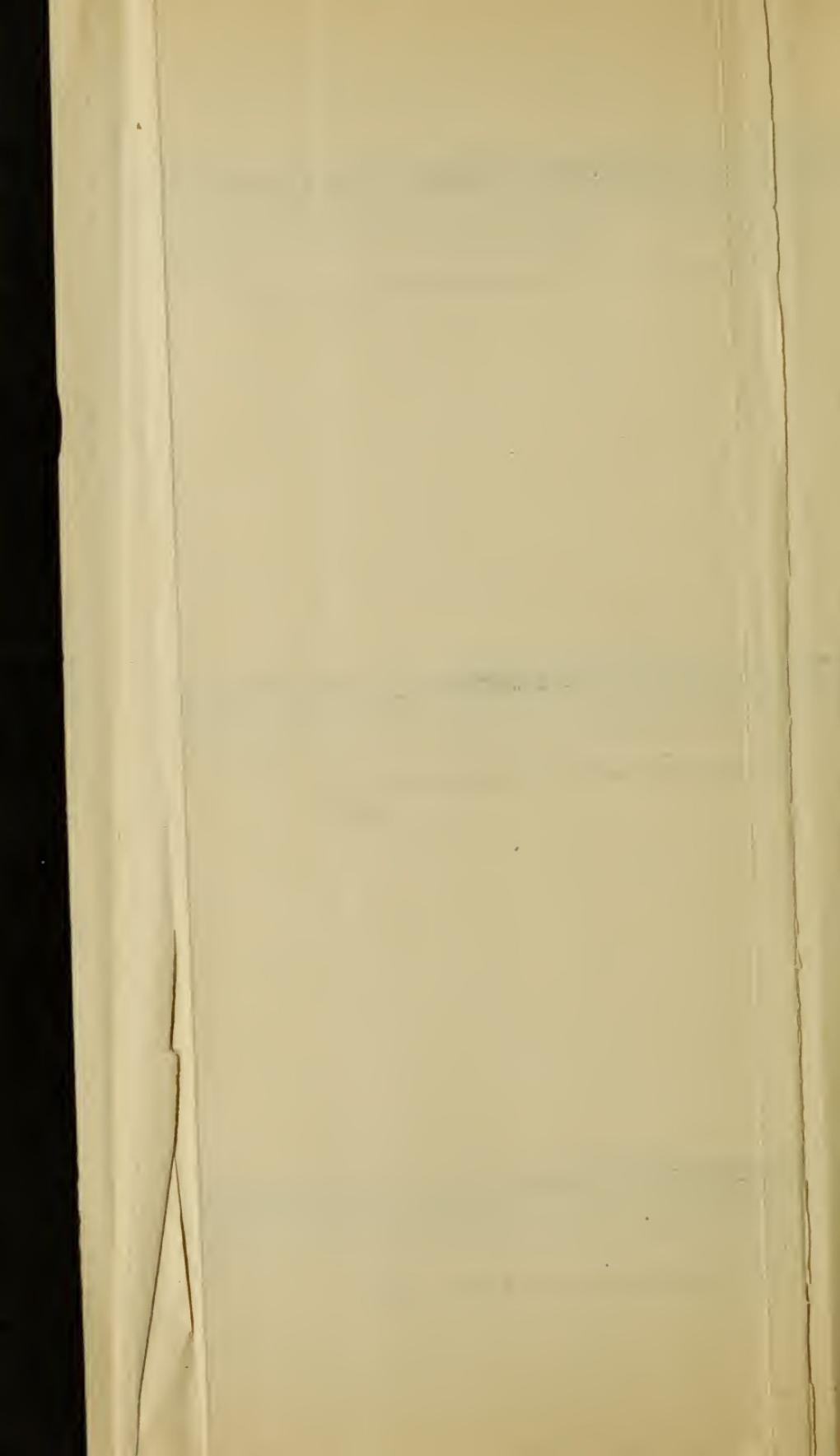
The success of the "Mayflower," the "Puritan," and the "Volunteer" has called the attention of the world to the special talent thus gradually developed from the circumstances of Boston Harbor. It is, perhaps, more difficult for the people of Boston to realize the full value of their success than for others, taking a more distant view of it, to do so. A few incidents may be recalled to bring certain bearings of it better to mind.

This, for one:—To all appearances there had come, through inaction, to be scarce anything left of the old American regard for seafaring skill and prowess, when, one day last summer, through all the interior of the land, as well as in its seaports, hats everywhere went up with such enthusiasm over the result of a sailing-match of pleasure-boats, that no one could doubt that, in the heart of the nation, little provocation would be needed to stir all its old naval ardor into earnest action.

This, for another:—Certain men, of other parts of the country, send ten thousand dollars to a citizen of Boston as an expression of the gratification they have had in his work, adding, as an explanation, that, in their opinion, "nothing has, of late, redounded more to the credit of the country abroad" than the success of the "Volunteer," because of "the earnest concentration of ingenuity," of which it testifies, that Americans will be found capable whenever sufficient occasion comes to draw it out.

This, for yet another:—That, because of the special talent, bred, as has been shown, of Boston Harbor, which had been manifest in the successive triumphs of the "Mayflower," the "Puritan," and the "Volunteer," the master-workman of those pleasure-boats has been called to be a counsellor of the Secretary of the Navy, in a matter of vital consequence to the country.





And, lastly, this : that out of the recent history of Boston boats, and Boston pleasure-boating, measures of high statesmanship long culpably neglected, are plainly coming to receive a degree of attention that can hardly fail to have great results for the country. The two bills now before Congress looking to a naval volunteer or militia system, being examples of the manner in which this new current of popular disposition appears.

It is necessary to recall such facts as these, that too light a view may not be taken of that method of recreation in which Boston leads the world, and of those conditions of Boston Harbor out of which this leadership has grown.

Relatively to a large consideration of this subject attention is liable to be too much restricted to the more costly class of yachts. In Boston, boating is a thoroughly popular diversion ; interest in it is wide-spread. More than one quarter of all the registered yachts of the entire Atlantic, Pacific, and Lake coasts have their home berths in the waters of the city and its suburbs. The whole number of masted pleasure-craft sailing the harbor is at least seven hundred. A large proportion of these are small and inexpensive boats, and, of the larger, some are owned by clubs of industrious men, individually, of moderate means. Many of the owners live in the interior, coming to Boston and using their boats only during a summer's vacation from business.

It is to be considered, also, that boating is an amusement much enjoyed by many who take no part in it except as lookers-on ; and, with reference to the amusement the harbor affords to these, it must be remembered that, besides pleasure-boats proper, Boston has a large fleet of light fishing-craft, among which not a few are admirably fashioned and admirably sailed.

Owing to the enjoyment which the harbor offers many excursion trains are now run from a distance for the accommo-

dation of those wishing to visit its shores. A number of large hotels, steamboats, and local railroads have also been built for them. Hundreds of families live, for a few weeks every year, in tents, pitched at points looking upon the harbor, and, of late, numerous light, wooden bungalows have been built in situations first occupied in this way. Many sojourners in these come from a distance.

It will be evident, from these facts, that as, throughout the country, the number of men increases who can choose their dwelling-places independently of immediate money-earning considerations, and of men who are able and inclined to engage in pleasure-boating excursions, and that, as large numbers become interested in aquatic sports and seaboard scenery, the attractiveness of its harbor is to be reckoned no insignificant element of the trade and prosperity of the city. It will then be evident, further, that if its attractiveness, as a summer-resort, can be materially increased by a moderate outlay, it will be profitable to make such outlay.

In what, then, it is to be asked, other than in the play of

its large and lively fleet of fishing and pleasure craft, does the special attractiveness of the harbor consist? The adjoining diagram shows the picturesque disposition of the principal headlands, bays, and islands (outlined, approximately, at half



tide). The special attractiveness of the harbor lies partly in the contrast of the intricate passages and vistas among these, with the unbroken expanse of the ocean upon which it opens, and partly in the varied forms of the bluffs, crags, bars, beaches, and fens that form its shores.¹

What are the drawbacks to these attractive circumstances?

Chief among them must be recognized the generally hard-featured, bare, bleak, and inhospitable aspect of the headlands and islands. Let any one, passing through the harbor, imagine them clothed with foliage of any kind, and it will be felt how much more agreeable its character would be if they were generally wooded.

Stumps, that still remain upon the most exposed, the rockiest, and bleakest of the islands show that they formerly were wooded. Once cleared, a second growth has been prevented by cropping and pasturing. The land being then much more open than before to frost and drying heat, rains, gales, and salt spray, it has ever since been losing soil and the soil remaining has been losing fertility. Hence the scenery of the harbor has been and is every year being despoiled more and more of its original beauty; its artificial features are becoming more and more disagreeably conspicuous relatively to its natural features, and in these respects it is becoming less and less attractive.

The question whether the waste thus in progress can be arrested, and whether what has been lost can be recovered, is, happily, one to be answered by reference to the result of means used elsewhere for a similar purpose.

The difficulties to be overcome lie chiefly in the bleakness and dryness of much of the land most desirable to be planted; somewhat, also, at certain points, to its exposure

¹ A full description of the various natural features of the harbor will be found at p. 96 of the Appendix, compiled from the "Atlantic Coast Pilot."

to salt spray. They are such that trees of the sorts more commonly seen in the lawns, parks, cemeteries, and roadsides of the landward suburbs of the city could not be wisely planted. The suggestion offered by the Memorial Association is that the original forest may be restored. Should this be attempted no results are to be expected that can be brought in comparison with those which are, unfortunately, associated in most minds with the term landscape-gardening. The beauty to be gained through such an operation is not the beauty of clusters, clumps, groups, or any artfully studied combination of trees; much less is it that of trees admirable for their beauty singly. It is the beauty of large compositions as these may be affected, to one looking in any direction across the harbor, by broad masses of foliage palpitating over the rigid structure of the islands and headlands; lifting their skylines; giving them some additional, but not excessive, variety of tint, greater play of light and shade, and completely overcoming the present hardness of outline of their loamy parts, without destroying the ruggedness of their rocky parts.

Having such an end in view, the trees to be planted will be of the same kinds with those formerly growing on the ground. That they may help one another to overcome the difficulties of the situation they will, when planted, be small, pliant and adaptable, offering little for the wind to tussle with; they will be low-branched, and will be set snugly together. A large proportion of all, intimately mingled with the others, will be of species the growth of which, like that of the little white birch of our rural roadsides, is rapid while young but not of long continuance. These, after a few years, will be overtopped and smothered by trees of slower and larger growth, greater constitutional vigor, and more lasting qualities. The former will have served as nurses to the

latter while they are becoming established, and if timely thinning should be neglected, as it is so apt to be, they will gradually disappear by natural process before the permanent stock will be fatally injured by crowding.

Years must pass before the permanent growth can acquire a full-grown forest character, but almost at once the sapling plantations will give a pleasing softness and geniality to those elements of the scenery that are not contributive to its picturesque ruggedness. Three years after the planting is finished the harbor, as a whole, will have acquired a decidedly more good-natured, cheerful, and inviting character.

An impression is common that at most points of the harbor trees cannot be got to grow satisfactorily, and instances are referred to in which they have failed or, at the best, have grown very slowly and with distorted forms. So far as it has been practicable to ascertain, the trees, in these cases, have been ill-chosen and ill-planted, and the result has no bearing upon the proposition favored by the Memorial Association.

Reasons for confidence that, under a course of management judiciously adapted to the special difficulties of the situation, an undertaking of the kind that has been outlined would be successful, are found in experiences of which those of Mr. Joseph Story Fay, at Wood's Holl, supply an example.

The outer part of the sea-beaten promontory of Wood's Holl, had probably been devastated in the same manner as the islands of Boston Harbor. Thirty years ago it was even more bare of trees, bleak and cheerless than they are. As the result of operations which have been carried on within that period by Mr. Fay, about two hundred acres of it is now covered with dense woods of well-grown trees. Mr. Fay, visiting Boston Harbor islands last summer with the Com-

missioners, could see no reason to doubt that by similar operations upon them equally satisfactory results would be secured.

There is a large tract of barren land in a most exposed situation on the west coast of Lake Michigan which, a few years ago, was covered with drifting sand. Because it was supposed to be worthless, and that any attempt to improve it would be regarded as a "Folly," Mr. Robert Douglass chose to take it as a place to demonstrate the practicability of establishing forests under such special difficulties as the situation presented. He has been entirely successful, the sand is fixed and sheltered, leaf mould is beginning to accumulate upon it, and the ground is becoming comparatively moist and productive.

The Kansas City, Fort Scott & Gulf Railroad Company, of which the head-quarters are in this city, held in 1879 a body of bleak and arid land, of alkaline soil, naturally treeless. Some attempts to grow trees upon it had been unsuccessful, and it was generally believed to be incapable of bearing trees. In that year Mr. Douglass offered to take a contract to establish trees upon it, payment to be made him conditionally upon results. He was completely successful, and six hundred acres of the ground are now shaded by a thrifty and valuable wood. On this and other tracts, naturally treeless and supposed to present peculiar difficulties to the growth of trees, there are at this time three million flourishing trees that have been planted, under contracts with different landowners, from five to eleven years ago, by Mr. Douglass.

Mr. Douglass has had more experience in planting under trying circumstances, and has planted more extensively and successfully than any other man on the continent. It being known that he had a few years since critically examined the

plantations of Mr. Fay and others within reach of the sea spray, and that he had some personal knowledge of Boston Harbor, it was thought best to ask his judgment of the scheme under consideration. After preliminary correspondence Mr. Douglass expressed his opinion of it by offering to enter into a contract to carry it out. The terms of his offer will here be stated as an indication of what a man of his experience considers practicable to be accomplished, and at what outlay.

Supposing that the aggregate areas to be planted would not be less than four hundred acres in extent, Mr. Douglass would engage to establish plantations such as have been suggested; to care for them until the trees should be well established, in thrifty condition, and so completely shading the ground that any further cultivation of it would be unnecessary. For this service he would agree to accept, as his compensation, payment at rates, which, with a reasonable allowance for incidental expenses of the Department in connection with and supplementary to the work, would be met by successive appropriations for five years of six thousand dollars a year. Payment of Mr. Douglass' part to be made in instalments as the work satisfactorily advances, the last instalment, amounting to 16% of the whole, to be due only when trees to the number of eight hundred thousand are certified by qualified agents appointed by the Department to have been found well-rooted and thriftily growing upon the ground.

A compact statement is given on the adjoining sheet as to the position, area, ownership, and jurisdiction of thirty-seven islands; of the position and name of thirty-eight detached islets, ledges and beacons, and of the name, position, and some other particulars of fifty headlands, of Boston Bay.

The aggregate area of the islands is a little more than 1,300 acres. Of this the city owns 439 acres; the United States, 241 acres; and, of the remainder, 500 acres have but five owners.

So far as any part of this land has a productive value, it is chiefly because of the pastureage that is found upon it. On but few islands is this considered to be of more than trifling consequence. Where it is of any notable importance, it would, as a rule, be an advantage to have thickets planted along the shore borders of the high land, and clusters of trees at intervals through the pasture-ground, in the shade of which, when grown, cattle would rest.

On the islands owned by the city there are several public institutions, chiefly of a charitable character. Much of the land of these is cultivated, pastured, or occupied by buildings and yards, and, of that which is available for woods, it would be better that much should be planted under the direction and by the forces of the departments in charge of them. It has been ascertained that the heads of these are well inclined to undertake this work, and especially so if supplied by the Park Department with nursery stock for the purpose. On each of them, however, it is believed that there are bodies of land, generally of small extent, which might be planted by the Park Department under an arrangement such as that suggested by Mr. Douglass, while, substantially, the whole of some of the smaller would be available. Conference with the War Department leads to a belief that it would not object to make arrangements with the Commissioners under which considerable portions of the government islands might be planted by the Department. It has been ascertained, also, that private owners of other islands important to be planted are well disposed to coöperate with the city in carrying out the scheme. It is to be hoped that the purpose of the city



would likewise be aided by favorable action of towns bordering upon the harbor beyond the jurisdiction of Boston. A movement in this direction has already been made by the town of Quincy. It is also reasonable to assume that when a demonstration shall have been made of the practicability of growing trees upon the more exposed points, there will be a great deal of planting about the harbor independently of any arrangement with the city, as there is in all its landward suburbs; an increased value of the land being sure to follow.

It is believed, as the general result of this review, that if the Park Department should be provided with the amount of \$5,000 a year, for six years, to be used at its discretion for the purpose desired to be accomplished by the Memorial Association, it would, with such coöperation as it would be convenient for other departments of the city government to offer, be able to secure a substantial success. And it is believed that this success would have been gained with large profit to the city.

II.

THE OUTER PLEASURE CIRCUIT OF BACK BAY.

An important addition to the means before had in view, for the open-air recreation of the people of Boston, has been well advanced during the last year, independently of your Department. It is that commonly called, but by no means described, as the widening of Beacon Street. Its importance lies largely in the circumstance that it will form a short, direct, sylvan pleasure-way between the system of grounds preparing by the Department and the existing spacious but

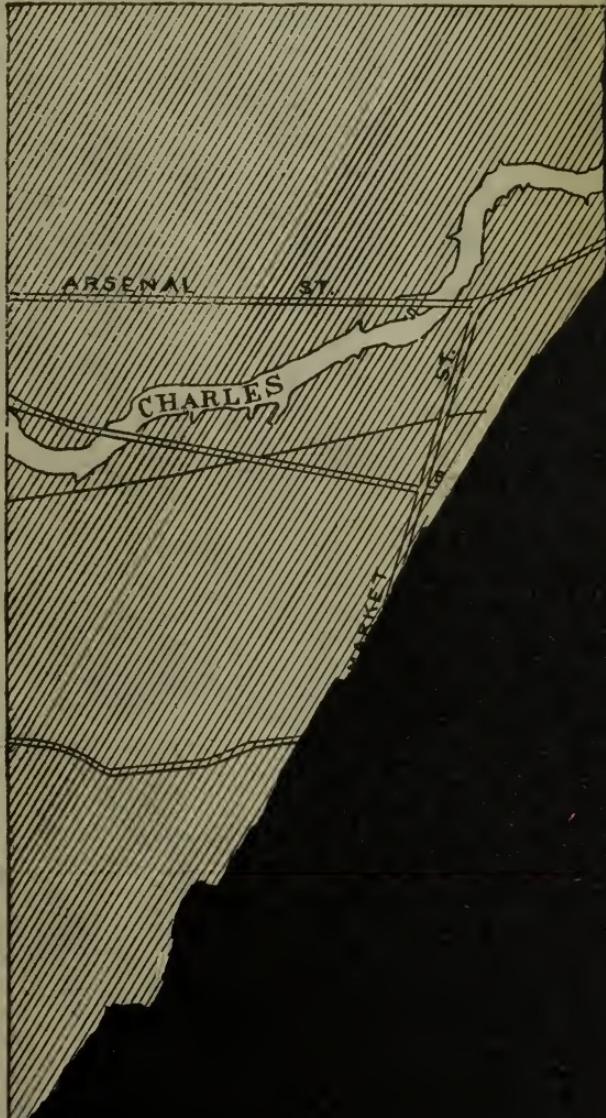
heretofore comparatively remote, inland, isolated, and little used public pleasure-ground at Chestnut Hill.

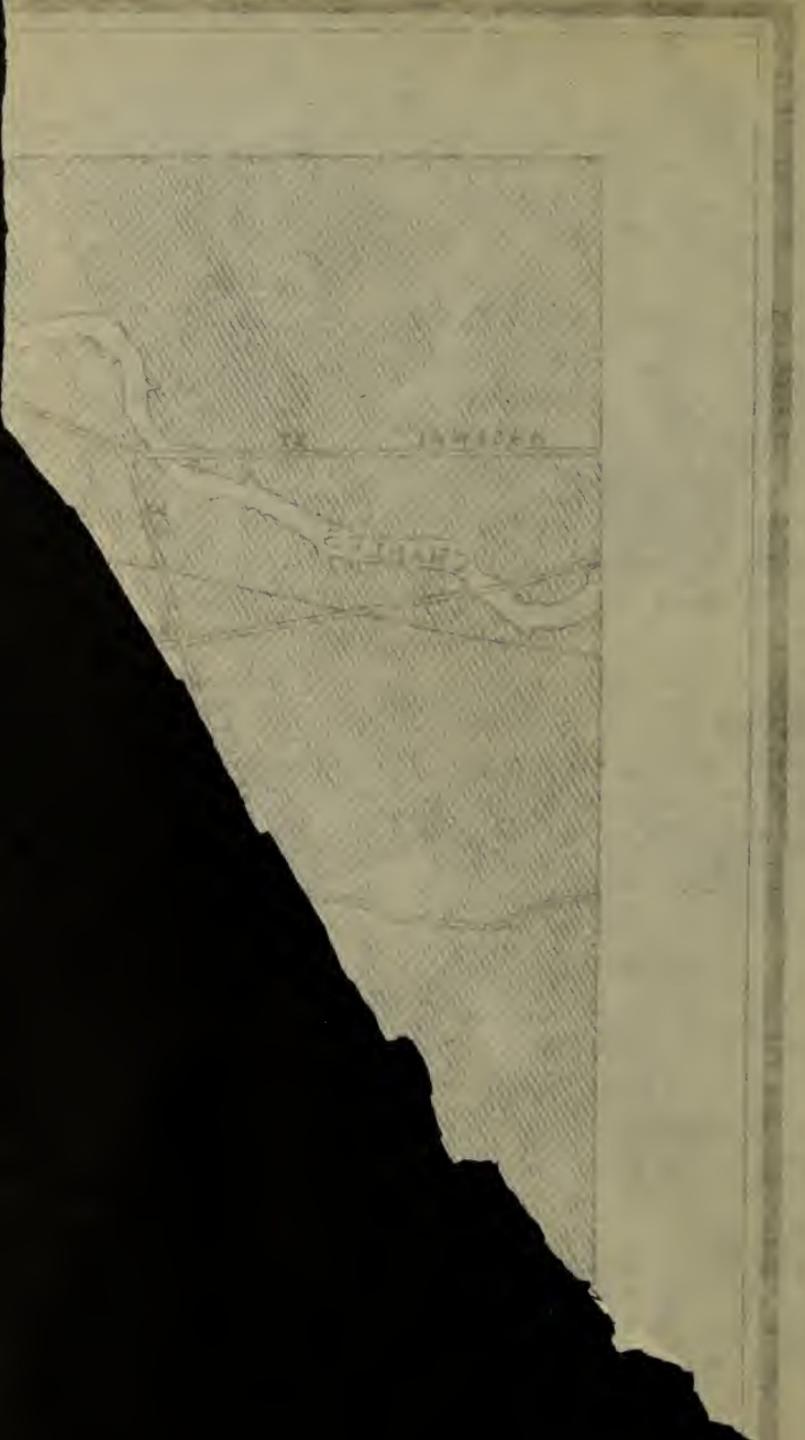
Before the plans of this work had been matured a suggestion of the undersigned was cheerfully accepted by the movers of it looking to a considerable improvement of the Back-Bay part of the general park scheme. The advantages to be gained were also apparent to the Park Commissioners. They are more intelligently presented in the accompanying map of the Back Bay Fens than they could be by any verbal description. It will be seen that the broad road, planned to lead from Audubon Circle on Beacon Street to the Audubon Road, as formerly planned, completes a circuit passage in the outer part of the Back-Bay district, a mile and three-quarters in length, all tree-lined, and in every respect adapted to pleasure-driving and walking.

III.

NOMENCLATURE OF THE PARKWAY SYSTEM.

When the entire scheme has been carried out, towards the realization of which the works of your Department now in progress at Marine and Franklin Parks, the Arboretum, and Back Bay, are intended to promote parts, it will be plain that the complete system is of much greater value than the sum of the value of its different parts. But for some years to come those elements of its value which lie in the connecting parts of the scheme, will be but imaginary, and, as matters of imagination, but little taken thought of. Very few citizens have yet any clear idea of what is intended in this respect, or of the many advantages to be gained by carrying out the intention. Hence there is constant danger that other





undertakings, public and private, will be devised and prosecuted in a manner that will make costly, if not disastrous, complications.

For this reason any expedient is to be welcomed that will tend to make the idea of federation and continuity, between the several principal works of the Department, familiar to the public.

The term *Parkway*, hitherto used to designate the continuous and connecting thread of the system, is probably as expressive of this idea as any that can be devised, and is as likely as any to come easily into familiar use with those having no special interest in the subject.

But, assuming a general public use of this term for the entire continuous way from South Boston to Back Bay, it has been thought that convenience would require distinctive names to be given to different parts of it. With this conviction the Commissioners, in 1885, directed the names *Rumford*, *Longview*, and *Riverdale*, to be used as the designation respectively of parts of the Parkway between Boylston Bridge and Brookline Avenue. But these names are not as yet known to the general public, and it is now suggested for the consideration of the Board :—

First. That a uniform termination in all names to be applied to parts of the Parkway would, as it came into use, naturally aid in making the idea of continuity and unity familiar to the public, and, if such termination were short, simple and common, it would be in various ways a convenience.

Second. That the designatory parts of each local name might with advantage, as far as practicable without a harsh sacrifice of euphony, be derived from some topographical or historical local circumstance. For example, that part of the

Parkway in which the course of the old Muddy River is followed might, under the proposed rule, instead of being called the Riverdale Road be called Riverway.

It is not particularly desirable that that part of the Back Bay improvement, which is intended to serve at times for the storage of flood waters, should be familiarly known to the public by its technical designation of *the basin*. This term is useful when it is desired to refer to its essential engineering function, but, regarding it as an accessory of a public pleasure resort, the more that function can be kept in the background the better. Looking for a name not open to this objection, it may be remembered that in the annual report of the Department for 1879, in which the scheme was first set forth, the designed landscape character of the basin was described as that of a clean, highly verdant, *fenny* meadow, set between steep banks, upon which banks plantations would be formed to eventually have more of a wildwood than of a park or garden aspect. Professional critics then and afterwards expressed the opinion that this proposition was chimerical, and the Commissioners were urged to abandon the scheme as likely to be wasteful. It was admitted by the Department that the purpose to artificially form a salt fen of the character proposed was to be regarded as in some degree experimental. So long as the result of the experiment could be considered doubtful, it has not been best to give the place a name that would be appropriate only if it should prove successful. Its success is now so far established that next year, when the circuit road of the lower division of the basin shall be opened to the public, a sufficient approach to what was expected to be attained in the landscape character of its bottom will have been already accomplished to show that the result is not going to be unpleasing. It will, at least, be palpable, when

the aspect of the finished part of the bottom is compared with what was to have been looked for as the result of any other method of treatment of it at any time suggested, that the course pursued by the Department should be regarded as a matter for congratulation.

In this view it is submitted that it will now be in better taste to call the bottom of the basin by a name significant of its landscape character, than either by one bringing to mind its primary utility, or by one provoking comparison with grounds prepared with exclusive regard to their use as pleasure-resorts. It is therefore suggested that instead of being called the Back Bay Basin, or the Back Bay Park, the place should be called the Back Bay Fens, or The Fens; that the sylvan bank of the basin should be called The Fenside, and that so much of the Parkway as is carried on the bank should be called The Fenway.

IV.

BACK BAY AND STONY BROOK.

Under an Act of the General Court of the present year, new plans for the drainage of the Stony Brook Valley have been adopted, which will have the effect, at times, of rapidly throwing a much larger quantity of water into the basin at Back Bay, than, when this basin was designed, the Department had been asked to provide storage for.

In the report of the Department presenting the plan of the basin to the Mayor and Councils (1880), it was stated that according to the calculations of the City Engineer and the Superintendent of Sewers, a rise of water of one foot above

the salt vegetation of the Fens would occur but rarely; a rise of as much as five feet, if ever, only at intervals of many years; a rise of more than five feet, never. It was assumed that, with the means used to check and break down heavy swells (described in the report), the planted banks of the basin would be little injured by a rise of from one to two feet, and that after the soil at a higher elevation, up to five feet, should be well interwoven with roots of woody vegetation, although some damage from the higher floods might rarely occur, it would not be of an irreparable character.¹

But with the quantity of water which will be thrown into the basin under the new Stony-Brook drainage-plan more frequent and deeper floods are to be expected than had thus been provided for. The least of the unpleasant results to follow will be the occasional submergence of roads and walks that have been laid out above the highest previously assumed flood level. This will cause but temporary inconvenience and may be rightly regarded as of no great consequence. It is of much more importance that the higher the water in the basin, in any time of storm, the less effectual will be the precautions which have been taken to prevent a heavy swell from forming and spray from washing the higher parts of the bank, and the longer will the vegetation growing in the lower parts remain soaking in brackish water.

With the dash and undertow of a heavier swell the steeper upper slopes of the Fenside must be expected to be fretted, undermined and washed away and trees to be loosened at

The best account of the plan from the engineering point of view is to be found in a paper by E. W. Howe, Esq., C. E., printed by the Boston Society of Civil Engineers, 1881. The expectations above stated as to the amount of water to be provided for in the basin under the arrangements assumed, have thus far been sustained. In the great flood of 1885 the water in the basin rose at no time more than three feet above the normal level.

their roots, blown down and thrown out. It may now be thought that this is a matter, also, of but little consequence ; that the bank may be mended and new plantings made. But if the trees should have been allowed to grow to good size, all experience shows that such an occurrence would excite much popular indignation.

Had the requirements now to be made upon the basin been made when the plan was called for, provision would have been advised for them, either by an enlargement of the present basin ; by flood basins to be formed higher up the stream, or by a conduit discharging directly into Charles River. But either of these expedients would now be so costly that the adoption of it is only to be expected under the immediate pressure of a public catastrophe.

Presuming that neither will be soon adopted and that the risk must be taken of an occasional soaking of the roots of the Fenside Woods in brackish water, it is probable that the worst injury to be apprehended under the present arrangement might be guarded against in a comparatively inexpensive way by reinforcing with rocks the face of parts of the bank which are from two to seven feet above the level of the Fens. Nothing like a complete paving of the surface would be necessary. Using chiefly rocks as large as could be conveniently handled without a derrick, and placing them with studied irregularity, and not with perfect continuity ; training creepers over them and letting trees and underwood grow up between them, they would, after a few years, be inconspicuous. In the end they would give a more natural and more agreeable aspect to the bank, while they would prevent land-slides, and any considerable undermining of the trees.

The public needs to be often asked to bear in mind that the cost of the basin in the Back-Bay district, preparing by

the Park Department, is a necessary expedient for the economical drainage of another district of the city, parts of which are more than six miles away from the Back Bay.

TREE-CUTTING ON FRANKLIN PARK.

In the proper order of the work of Franklin Park many trees must be removed the coming season. To those who consider this operation without regard to the leading general purposes of the adopted plan of the park, the operation will appear a grievous one. During the last two years the Department has taken much pains to make the public familiar with these purposes. To this end a carefully prepared explanation of them was printed, with a map of the park, which has been circulated in different forms in large numbers. It has been reproduced in the leading daily and weekly newspapers, and copies, on cardboard and in the form of roller-maps, have been hung on the walls of many offices and places of general resort. Several thousand have been distributed to individual addresses. Copies have been posted in the park, and, to aid those who might wish to trace out the plan on the ground, numerous guiding stakes have been set. Not a single remonstrance or objection to the general plan has been made, except where, along its boundaries, it has been supposed that individual interests might have been better promoted.

One feature of the plan, as thus fully made known in advance, is a series of roads and walks through existing woods. In planning these care has been taken that they shall involve the least possible injury to the natural features, and the least possible destruction of the finer and more promising trees. Necessarily many must be taken out to make way for the roads and walks, and more than slopes of natural char-

acter may be formed where the existing natural surface has to be broken. Not unfrequently, also, insignificant or decaying and unpromising trees are to be removed that others may be better developed, and that natural features of various kinds may be better brought into view. No trees will be removed at any point without careful consideration.

Respectfully,

FREDERICK LAW OLMSTED,
Landscape Architect Advisory.

BOSTON, 30th December, 1887.

CITY ENGINEER'S REPORT.

OFFICE OF CITY ENGINEER,

CITY HALL, BOSTON, Jan. 18, 1888.

HON. BENJAMIN DEAN, *Chairman Board of Park Commissioners:*—

SIR,—I herewith submit the following report of work done and of the matters of interest in connection with the work placed under my direction by your Board; the work being continued under the immediate charge of Assistant Engineer E. W. Howe:—

THE PARKWAY.—BACK BAY FENS.

Excavation of Waterway.—Upon the passage of the appropriation for Park Construction, work was at once begun putting in order the dredging-plant, which, having been in use for five years, needed extensive repairs.

Early in April the excavation of the waterway through the marsh at the southerly end of The Fens was resumed. This work has been continued through the season, and the water-

way completed as far as the location of the proposed bridge at the junction of the Fenway and Audubon Road. Work in this direction can go no further until the additional land required between this point and Brookline Avenue is secured, as the material to be excavated from the waterway will be needed for filling on the Parkway and cannot now be disposed of without encroaching upon private lands. Unless this work can go on during the next season the dredging-plant will have but a few weeks' work to do.

In addition to the above, a large amount of work was done in trimming up portions of the shores, and of the bottom of the basin, which had been passed by in previous seasons.

Grading of Marsh. — The grading of the large area of marsh north of Agassiz Road has been completed, the area graded the past season being 7.6 acres. A portion of this area has been covered with marsh-sods cut from the old marsh, and the balance of the area is to be seeded with marsh grasses. The material for grading was excavated by the dredger, loaded on scows, and unloaded and moved into place by wheelbarrows. On account of the long distance a large part of the material had to be moved over soft ground the work has been slow and expensive.

Drainage. — Drains and catch-basins have been built in all that part of the Parkway north of Agassiz Road. The length of drain laid has been 2,700 feet, the number of man-holes built 5, and the number of catch-basins, 26. The drains on Boylston Entrance, and on the street between Boylston Entrance and the B. & A. R.R., discharge into a sewer built by the Sewer Department in 1886. The other drains, on the east side of the Parkway, discharge into the covered channel of Stony Brook, except two catch-basins on the ride, which have an outlet into the waterway.

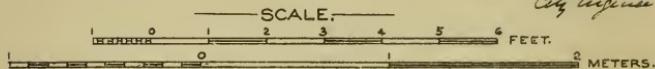
The drains on the west side of the Parkway discharge into the water-way at a point about 250 feet north of Agassiz Bridge. An outlet for the drains to be built on Agassiz Road has been constructed.

Man-holes have been built at every change of line and grade, and catch-basins have been built on each side of the roadway about 300 feet apart.

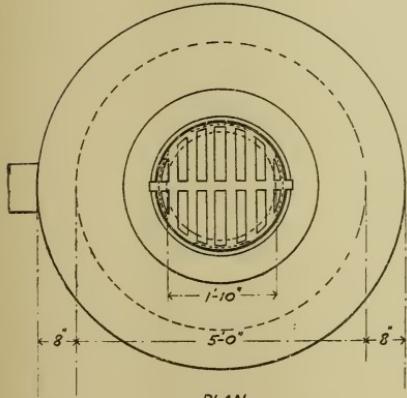
BOSTON PARK DEPARTMENT.
 THE PARKWAY-BACK BAY FENS.
 CATCH BASINS.

JAN. 1888.

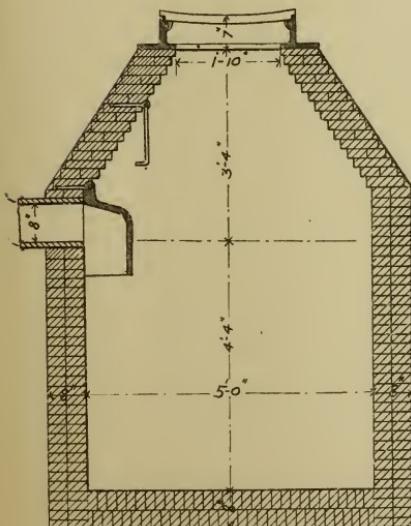
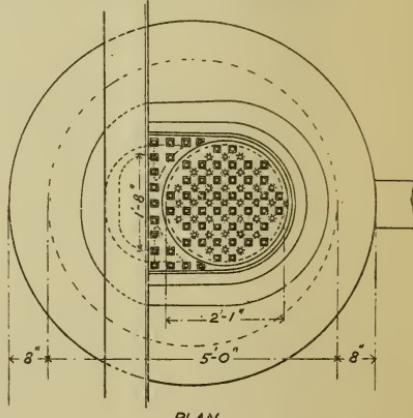
*William Jackson
C'ty Engineer*



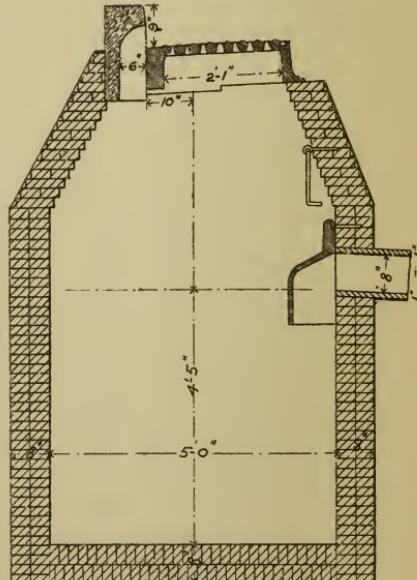
CATCH BASIN WHERE THERE IS NO CURBSTONE.



CATCH BASIN AT CURBSTONE.



VERTICAL SECTION.



VERTICAL SECTION.

The accompanying drawings show the forms of catch-basins built.

Roadways and Walks. — The curbstones were set and gutters paved on a part of the roadway in 1885. In addition, during the past year, 8,849 lineal feet of curbstone have been set, and 3,953 square yards of gutters paved; 3,600 lineal feet of curbstone and about 32,000 paving blocks are on hand.

The grade of Boylston Entrance was raised to meet a change in the established grade of Boylston Street; the curbstone and gutters were taken up, the entrance filled to the new grade, and the curbstone reset, and gutters repaved. The roadway from Commonwealth Avenue to Westland Avenue and the roadway at Boylston Entrance have been finished.

The roadway of the west side of the Parkway from the B. & A. R.R. to Agassiz Bridge has been nearly sub-graded, and about one-half of it is stoned, so that, the curbstones and gutters being in place, but little work is needed to complete this section. The completion of Agassiz Road has been delayed on account of the bridge not being completed in season to allow the old channel across the road to be filled. The bridge is now so far finished that it can be used, and the curbstone being on hand for this road, it will take but a short time to complete it after the next season opens. The roadways have been constructed in the following manner. The roadbed was carefully graded to 8 inches below the surface of the finished road and thoroughly rolled. The curbstones were first set; the gutters were paved with rectangular granite blocks, for a width generally of 4 feet, the blocks being laid in rows at right angles to the line of curb; the surface of the paving at the curb is 7 inches below the top of the curb, and rises 2 inches in the width of 4 feet. The roadway was then covered with broken stone; the stone was broken to sizes about as follows: for the first 4 inches in depth about 4 inches in diameter; then 3 inches in depth $2\frac{1}{2}$ inches in diameter; then 1 inch in depth about 1 inch in diameter; then a layer of screened gravel or fine stone screenings from the crushers was spread on top; each layer was well watered and rolled with $2\frac{1}{2}$ -ton sectional grooved rollers. The surface of the

roadway has a fall from the centre to the gutter of 1 in 30. The above-described method of road construction is cheaper and less substantial than would be desirable if the conditions were different. It must be understood, however, that the land upon which the roads are built has been but recently filled, and the filling is still settling, and will continue to do so for some years. A roadway prepared as this has been will last until the filling has reached a firm bearing, when it will be necessary to regrade the surface and a more enduring foundation can be laid if desired. There is, on the other hand, this to be said in favor of a cheap method of construction in this locality,— that the filling being of loose gravel and the surface of the roadway being at all points several feet above the level of the ground water, the subsoil will be well drained, and a light covering of road metal will wear much better than it would under less favorable conditions. Nearly all of the stone used has been purchased by contract, and of such a size as could be received by a stone-crusher. It was suggested at the beginning of the season that the amount of stone received could be more accurately ascertained if it was purchased by weight instead of by the more usual method of measurement in carts. Experience has confirmed this opinion. Scales were set up near the Westland Entrance, and all stone purchased has been weighed.

A stone-crushing plant was purchased and set up near the same point, and the stone has been crushed at a less price than the same could have been purchased, and the rate of crushing has been controlled to suit the work in hand better than if it had been done by private parties.

The Water Department has, during the year, laid the mains which will be required on those parts of the Parkway where work has been in progress, so that, except for making house connections with the water-mains, there will be no occasion for disturbing the road-bed. It is supposed that the sewers and gas-pipes for this district will be laid in the back passageways, and not in the Parkway.

The ride from just east of the Boylston Bridge, along the east side of the Fens, has been completed as far as Agassiz Road.

BOSTON PARK DEPARTMENT.
THE PARKWAY-BACK BAY FENS.

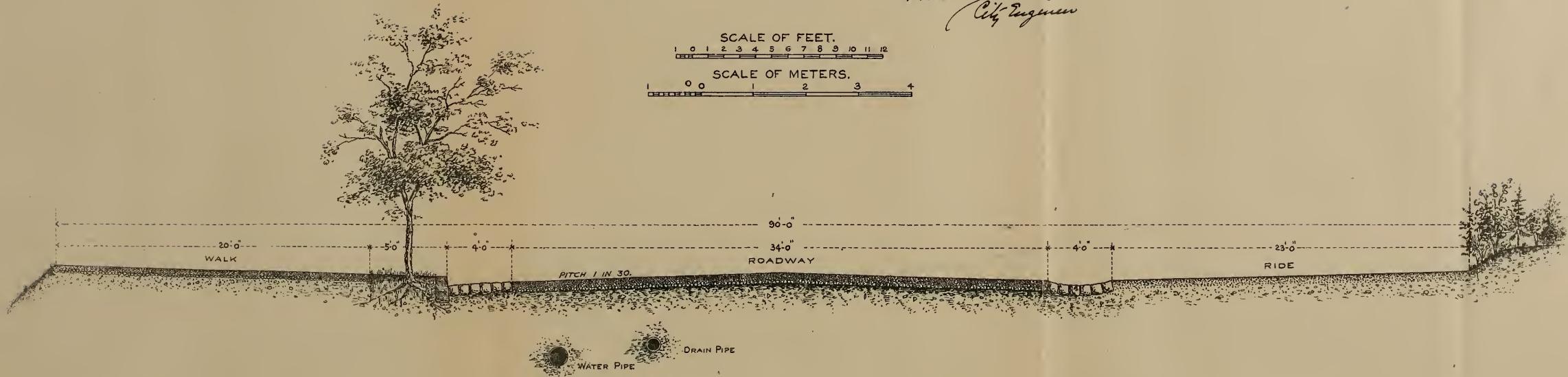
CROSS SECTION OF THE FENWAY.

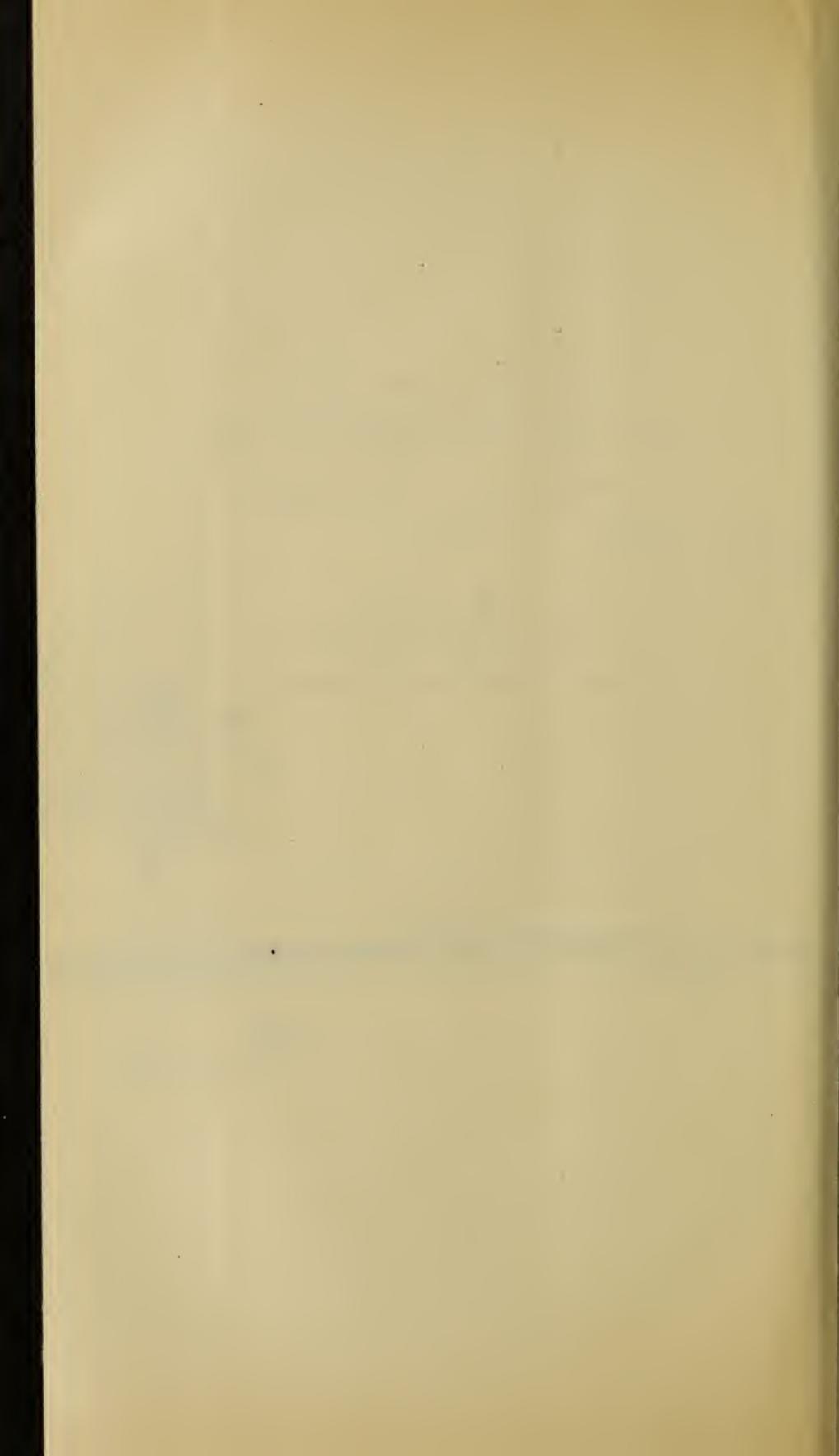
JAN. 1888.

*William A. Doham
City Engineer*

SCALE OF FEET.
1 0 1 2 3 4 5 6 7 8 9 10 11 12

SCALE OF METERS.
1 0 0 1 2 3 4





Where it borders the driveway it is separated therefrom by gutters 4 feet wide, paved in a dishing form; at other places there are cobblestone gutters on either side. The ride was constructed by subgrading to one foot below finished surface; it was then filled to grade with gravel, from which all stones larger than three-quarters inch in diameter had been separated by screening.

Gutters of concrete were laid on each side of the foot-path between the ride and the water.

The walk on the easterly and northerly sides of the drive between Commonwealth Avenue and Boylston Entrance has been paved with brick; walks in other places have been graded, and a small portion finished by making a surface of 5 inches of crushed stone, the upper inch being of fine screenings, and the whole thoroughly watered and rolled.

The accompanying sketch shows the construction of the walks, drive, and ride.

Agassiz Bridge. — Early in the spring plans were prepared for a deck bridge with stone abutments, but it was afterwards decided to build a bridge of an entirely different character. The change was made so late that, on account of the work of park construction having been resumed, the time of the engineering force was so occupied that there was some delay in preparing new plans and specifications.

On the 22d of July proposals were advertised for the building of this bridge, and the contract for doing the work was signed on August 16. Work was begun immediately upon the excavation for the foundation. This work was done by the city, the dredging-plant being used, as it could be done in this way more cheaply and quickly than if it had been included in the contract. Dams of mud and gravel were built across the channel to inclose the site of the bridge. The contractor began work on Sept. 22, and at this date his work is completed, except removing the centres from the arches and cleaning the brick-work.

The bridge consists of five semi-circular arches, the middle arch having a span of 12 feet; those on either side of the middle, spans of $10\frac{1}{2}$ feet, and the outer arches, spans of 9 feet. The wings are

returned on lines nearly parallel with the roadway. The foundation is a 4-inch spruce platform supported on spruce piles, capped with 10 in. × 10 in. spruce caps; a line of sheet piling is driven across each end of the platform.

Granite masonry abutments and piers, in courses of 2-feet rise, were built on this platform to the spring line of the arches. The arches, except at the ends, are of brick, the middle one being 16 inches in thickness and the others 12 inches in thickness. The ends of the arches are of Roxbury stone boulders, dressed sufficiently to make good radial joints, the exposed faces being left in their natural condition. The voussoirs are laid in cement; but the spandrels, the wall above the arches, and the wing-walls above the level of the water are of selected Roxbury stone boulders, laid dry with pockets of loam between and behind them so that vines or small shrubs can be grown over the face of the wall. The walls have considerable batter, the cross-section having a curved profile. The line of the wall is on a curve, and above it the bank will slope upwards to the line of the walk, where there is to be a low parapet. Over the middle arches, on either side of the bridge, small bays will be built out from the walk. This work, with the exception of the parapet walls, will be completed in a few weeks. The stone for the face walls was brought from Franklin Park, having been taken from old field fences. The arches and abutments have been back-filled, and as soon as the ice breaks up in the spring, so that the dredger can work, the dams will be removed, and the present channel across the road filled to grade.

Loaming and Planting.—Quite a large area in detached portions, including spaces for trees between the walks and drives, have been graded with loam, and a considerable amount of planting has been done under the immediate direction of the Assistant Landscape Gardener. A force of gardeners and laborers has also been employed throughout the season, under his direction, in the care of the plantations.

ARNOLD ARBORETUM.

Work was resumed here on February 3, quarrying stone for the driveways. This was continued until the frost was sufficiently

out of the ground to allow work on the drives. The drive to the summit of Bussey Hill was partially sub-graded in 1885. This work was continued and completed late in the fall. The grading of the top of the hill required the moving of a large amount of material, and, as it was all moved up-hill, it was expensive. The grading of the lower part of this drive, near its juncture with the drive around the hill, furnished a large amount of material which was used for filling the drive across the small pond in rear of the college buildings.

The drive was constructed in the following manner: the roadway was sub-graded so as to allow a depth of one foot for stone, the surface having a pitch of 1 in 20 from the centre to the gutter.

Catch-basins were built on each side of the roadway about 300 feet apart, with outlets on the side hill below the driveway. Tile drains were laid on each side of the driveway, for draining the subsoil; the one on the up-hill side was on the outer line of the sidewalk, while the drain on the down-hill side was on the line of the gutter; these drains were laid at a depth of 2 feet 6 inches below the surface, and they discharge into the catch-basins.

The gutters were then excavated 6 inches below the sub-grade of the roadway, and filled with screened gravel as a foundation for paving. The gutters are 3 feet wide, of cobblestones which were picked out of the excavation. A stone foundation 9 inches in thickness was laid on the roadway. After breaking down all unevennesses of these stones they were covered with 3 inches of crushed stone from $2\frac{1}{2}$ to $1\frac{1}{2}$ inches in diameter, well rolled, and this was then covered with screened gravel or stone dust thoroughly watered and rolled to a hard surface. The walks are separated from the gutters by a border of loam 2 feet wide and $1\frac{1}{2}$ feet deep. The walks have a fall of $\frac{1}{2}$ inch to a foot, from the outer edge to the loam border. They are constructed of 6 inches of crushed stone, covered with stone dust well compacted by watering and rolling.

The driveway from South to Centre Street has needed but slight repairs during the year. Early in the spring a short length of gutter was relaid, it having settled out of shape, and in the fall the whole surface received a thin coating of stone screenings, which was thoroughly rolled.

The spring or reservoir at the foot of Bussey Hill near the drive, from which the college obtained its water supply, had been partially drained by the building of the drive, so that in dry weather a sufficient supply of water could not be easily obtained. To remedy this, a well was dug to a depth of about 8 feet below the bottom of the spring, and curbed with a dry stone wall; it has given an ample supply of water.

FRANKLIN PARK.

Work was begun here early in April. The Playstead was first cleared of stone, the stone being broken up and deposited where it could be conveniently used on the driveway. A large area, about 9 acres, being too low to be drained, the soil was removed, and it was then filled, the greatest depth of filling being 6 feet; the filling came from the excavations for the driveway and its adjoining slopes. After the filling was done the soil was restored; drains were laid for draining the Playstead; the field of 27 acres received a top dressing of stable manure and other fertilizers, and was then ploughed and tilled through the summer. In September grass-seed was sown, which, before cold weather set in, was well started.

The grading of the drives around the Playstead has been carried on through the season, and is substantially completed. About 8,200 square yards of roadway has been ballasted, of which about 6,000 square yards are covered with crushed stone and only require covering with a coating of binding gravel or screenings from the crushed stones to be completed; 2,246 square yards of gutters have been paved with rectangular granite blocks; 6,740 square yards of walks have been covered with crushed stone, and 1,000 square yards entirely finished. Catch-basins and drains have been built for draining the whole of the drives around the Playstead, except for a short distance near the entrance to The Country Park. Usually 2-inch tile drains have been laid under the gutters on each side of the drive. Generally the method of construction of the driveways is the same as that described for the Arboretum, except that the roadway, gutters, grass border, and

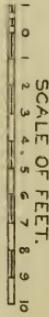
BOSTON PARK DEPARTMENT.

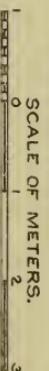
ARNOLD ARBORETUM.

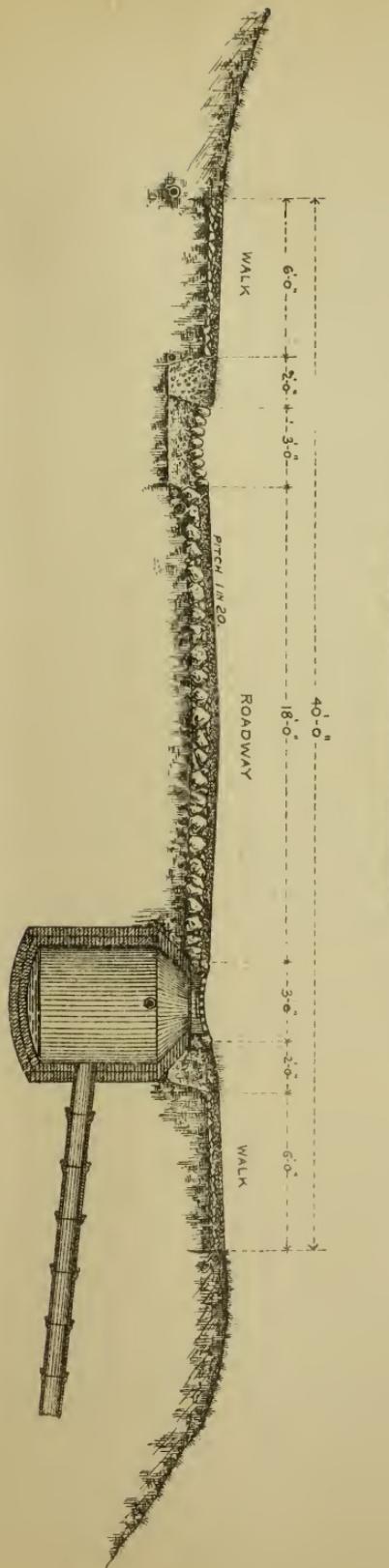
CROSS SECTION OF DRIVEWAY TO TOP OF BUSSEY HILL

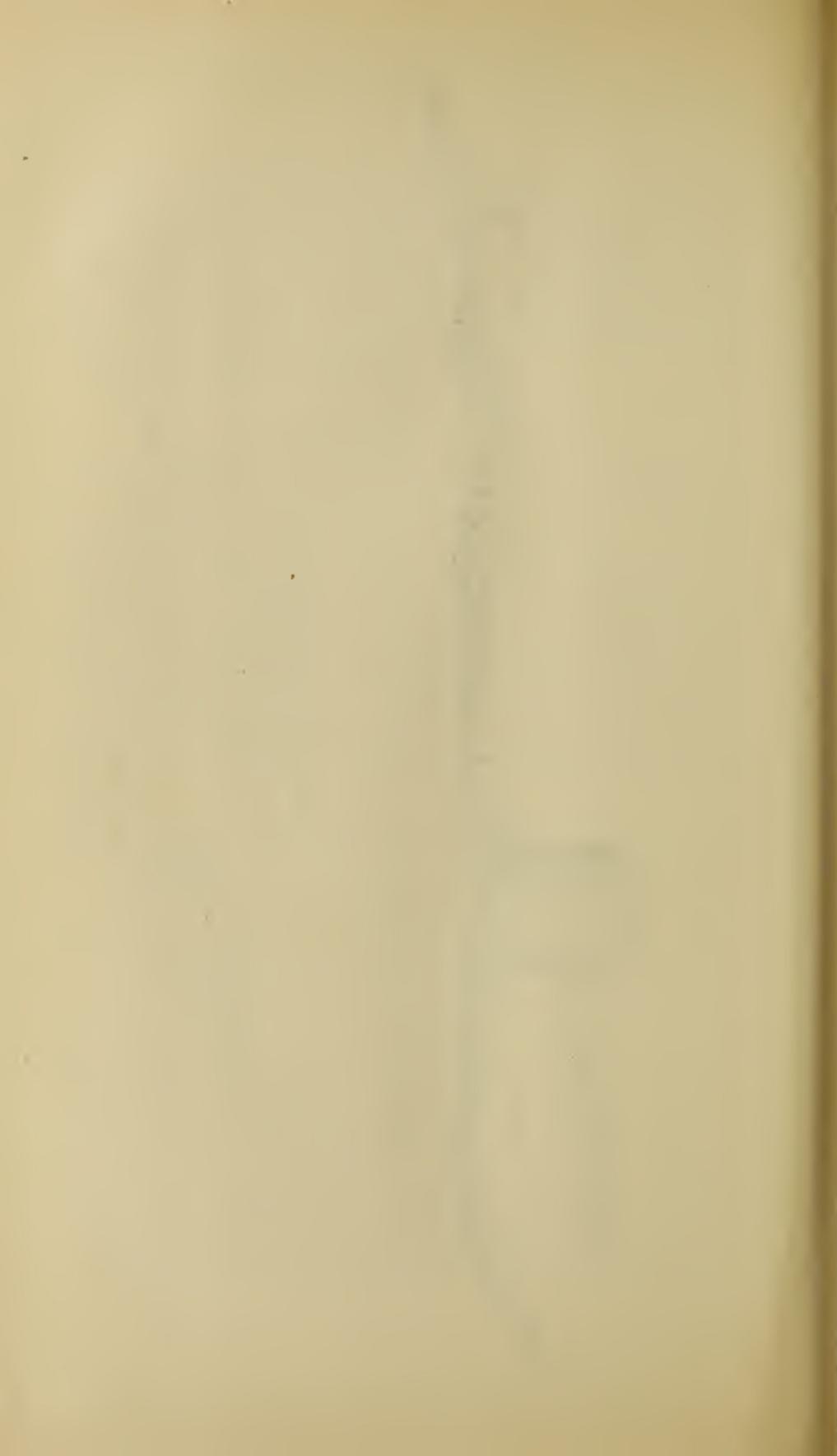
JAN. 1888.

*William Jackson
City Engineer*

SCALE OF FEET.


SCALE OF METERS.






walks are wider at Franklin Park than at the Arboretum, and the gutters are paved with granite blocks instead of cobblestones.

The catch-basins both here and at the Arboretum are of the form shown in the accompanying sketch. The total length of vitrified pipe-drains laid is 4,897 feet, varying in diameter from 8 inches to 18 inches. The length of tile drain is 7,200 feet, 2 inches and 3 inches in diameter. The number of man-holes built is 5, and the number of catch-basins 25.

A stone-crushing plant was purchased, and this has crushed all the stone used for surfacing the drives and walks.

About 1,200 lineal feet of the circuit drive around The Country Park has been graded, and work on this drive is now in progress.

The Overlook. — The wall which supports the Overlook has been completed, with the exception of the coping. The walk which the wall supports has been graded, and covered with crushed stone. The site of the proposed building has been partially excavated, and a drain to connect the building with the sewer in Sigourney Street is being built.

Administration Buildings. — The dwelling-house at the corner of Williams and Walnut streets has been occupied as an office for the police and engineering forces since the park was laid out. During the past season there have been built in the rear of it a carpenter shop, a blacksmith shop, and a yard and sheds for the storage of materials and tools.

The dwelling-house and stable have been painted, as have also the dwelling-house and stable occupied by the Assistant Landscape Gardener.

MARINE PARK.

At the beginning of the season changes were made in the building at the entrance to the pier to furnish larger accommodations for women and children, and also to provide a kitchen for the refectory.

A small amount of grading was done where the grading of Q Street had left some dangerous slopes on the park line.

Considerable filling has been dumped on the flats by parties who

have been dredging in the vicinity. A portion of this filling has been of gravel, which will probably remain where deposited; but the balance, being clay, may be washed away by the action of the waves.

Wooden Pier.—No repairs have been required on the wooden pier.

The number of lamps under the shelter at the outer end of the pier was increased, and a style of lamp purchased which was better suited to the locality and conditions than those first used.

Iron Pier.—A contract was made on July 11 for the construction of a permanent iron pier, extending from the temporary wooden pier. The length of iron pier contracted for is 12 spans, or 741 feet, with the option on the part of the Commissioners of requiring an additional 5 spans, or 308 lineal feet to be built. The contractors began work on the ground September 9, and at present have sunk the foundation columns for 6 spans, and the columns are partially filled with concrete.

A large amount of iron-work for the superstructure is on the ground, and everything is in good shape for going on with the work as soon as the weather is suitable for placing the concrete.

WOOD ISLAND PARK.

Upon Arbor Day about 100 trees were planted upon Neptune Road, the soil for the same having been deposited in 1885.

On the 27th of April a contract was made for building the abutments for a bridge over the Boston, Revere Beach, & Lynn R.R. Work was begun on May 9, and completed December 9.

CHARLES RIVER EMBANKMENT.

A force was set to work here on August 26, grading the grounds. Nearly sufficient material was on the ground for the purpose, the Embankment having been, for the past two years, a free dumping-ground for clean earth, or other material suitable for filling. A large amount of ashes has been deposited on the grounds by the Health Department. The whole of the Embankment has been graded to a sub-grade, with the exception of the

portions occupied by the Paving Department and the Commissioners of West Boston Bridge. The force is now engaged covering portions of the grounds where ashes were used for sub-grading with a layer of clay.

The gymnastic ground at the northerly end of the Embankment has been covered one foot in depth with gravel dredged from Charles River. A contract was made October 31 for covering the areas to be planted with loam. This work is now in progress, and it is expected to have it completed in season for planting in the spring.

COVERED CHANNEL OF MUDDY RIVER.

This conduit, damaged as described in the report of the City Engineer for 1884, was repaired in 1885, but a length of about 650 feet received but slight repairs at that time, it being thought that the settlement and consequent distortion had ceased. It, however, continued to grow worse, and about a year ago it became necessary to support it by interior bracing. This bracing still remains in the conduit, but is an obstruction to the flow of water, and is liable to cause serious trouble. This section will have to be practically rebuilt. Frequent examinations of the whole conduit have been made, and no deterioration has been discovered in any other part of it.

IN GENERAL.

A large amount of work, not described in the foregoing account, has been done, such as the making of surveys, plans and estimates for work to be done in the future.

During the past year an unusually large amount of work similar in character to that on the parks has been in progress in this vicinity; consequently there has been great difficulty in securing competent workmen, even at the advanced wages which it has been necessary to pay. Contractors have been unable to obtain materials promptly, and this, with the high price of labor and materials, has caused frequent delays and unusually high prices.

In consequence of these conditions, which could not have been foreseen when the estimates were made, the cost of the work done this season has been in excess of that estimated, and the delays consequent upon the difficulty of obtaining labor have retarded the work so that the volume of work done during the season was less than was expected.

Respectfully submitted,

WILLIAM JACKSON,

City Engineer.

VISITORS TO MARINE PARK.

Extracts from reports of the Special Officer on the park:—

July 14, 1887. — Nothing of unusual note occurred during the week until the city's band concert, last night, which was largely attended by a very appreciative and orderly assembly. The pier seems to be growing more and more popular as the season advances, and underneath the shelter it is largely patronized by family parties, who come down to spend the day, and bring their luncheon and babies with them; and, to judge from the expressions heard on every side, they would rather spend the day there than down at the beaches, because it is so easy of access from the city, and the sea-air is just as pure.

Sunday, July 17. — By actual count for 15 minutes (from 2 to 2.15 P.M.) 878 persons passed on the pier on their way down, and it was impossible to count them after that.

Tuesday, July 19. — Larger crowd than usual, on account of band concert.

Saturday, July 30. — The visitors arrived the first thing in the morning, and there was a steady stream all day. Should say about 600 children were wading in the water and rolling on the pier under the shelter.

Sunday, July 31. — The attendance to-day was simply enormous; a continual stream from 8 A.M. till after 9 P.M. I should judge about 5,000 children and 40,000 adults visited the park.

Monday, August 1. — About 300 children visitors.

Wednesday, August 3. — Large attendance of adults, and about 400 or 500 children.

Thursday, August 4. — The Boston Female Asylum for little girls, located at 1008 Washington Street, Mrs. Rich, Matron, had a picnic on the park, with 72 children and 6 teachers, and said they enjoyed it very much. Outside of that there were about 3,000 adults and 400 children.

Friday, August 5. — Attendance about 300 children and 900 adults.

Sunday, August 7. — There were fully as many visitors to-day as last Sunday. In the afternoon every seat was occupied under the shelter, and as soon as vacated by one party two or three eagerly sought it; and so it continued until I was relieved at six o'clock.

Monday, August 8. — About 200 children and between 600 and 700 adults visited the park.

Tuesday, August 9. — About 400 children and 700 adults.

Wednesday, August 10. — About 300 children and 500 adults.

Friday, August 12. — Between 300 and 400 children and 800 adults.

Saturday, August 13. — About 1,000 children and nearly 4,000 or 5,000 adults this afternoon.

Sunday, August 14. — About 20,000 visitors, including young and old.

Monday, August 15. — Quite a large number of visitors for Monday. From 2.30 till 6 o'clock every seat on north side and end of pier was occupied by ladies and children. We had all of 400 children and about 700 adults.

Sunday, August 21. — About 20,000 adults and 3,000 children.

Friday, August 26. — A dog swimming-match took place off the beach, and the visitors were more numerous than usual. About 3,000 adults and 1,000 children were on the beach and pier witnessing the sport.

Sunday, August 28. — No attendance of visitors in the morning, but after dinner we had, up to 6 o'clock, about 10,000 or 12,000 adults and 2,000 or 3,000 children. We also had a ph-

tographer from the Engineer's office taking views of the pier in the afternoon.

Tuesday, August 30. — There were about 1,500 visitors to-day; put a stop to an argument among yachtsmen about the relative qualities of the "Volunteer" and "Thistle," on the pier, as they were attracting a crowd.

Wednesday, August 31. — Quite chilly all day; few visitors till after 6 o'clock, when the wind changed, and brought out about 3,000 people to the city band concert.

Thursday, September 1. — About 1,000 adults and 400 children.

Sunday, September 4. — The visitors numbered about 10,000 persons, and were very orderly.

Monday, September 5 (Labor Day). — About 15,000 visitors, and order reigned all day.

Sunday, September 11. — Very chilly at park; visitors were nothing in comparison to last few Sundays.

Saturday, September 17. — About 500 visitors.

Sunday, September 18. — About 8,000 or 10,000 visitors.

Monday, September 19. — About 300 visitors.

Tuesday, September 20. — About 300 adults and 100 children.

Sunday, September 25. — Weather pretty chilly; about 2,000 visitors; very quiet.

Wednesday, September 28. — Pleasant to-day, and about 300 visitors; very quiet and orderly.

Sunday, October 2. — About 1,500 visitors up to 4 P.M., when the rain drove them home.

Wednesday, October 5. — Large number of visitors, mostly ladies, this afternoon.

Saturday, October 8. — About 400 to 500 visitors.

Sunday, October 9. — We had about 4,000 visitors, and, to judge from their conversation, the "Volunteer" and work on the iron pier were the attractions.

Monday, October 10. — 500 visitors, mostly ladies.

Sunday, October 16. — About 4,000 visitors all day, and the attraction was the new pier.

Sunday, October 23. — About 4,000 visitors looking at work on new pier.

Sunday, November 13. — About 2,500 visitors, including men, women, and children, who were mostly interested in the construction of the new pier and the work on the adjoining street.

Thursday, November 23. — The attendance of visitors for the week has been pretty slim, with the exception of Sunday, when we had about 2,500 all day looking at the work on the new pier.

Sunday, November 27. — 3,500 or 4,000 passed down the pier, the attraction being the work on the new pier.

PARK ORDINANCES.

IN BOARD OF PARK COMMISSIONERS, Aug. 20, 1886.

Voted, That the following rules, under the title of Ordinances, be adopted for the use and government of the Public Parks. *Provided, however*, that said rules shall not invalidate any pending prosecution or procedure, or any liability of any person for breach of any previous rule.

The Board of Park Commissioners of the City of Boston, by virtue of its authority to make rules for the use and government of the Public Parks of said city, and for breaches of such rules to affix penalties, hereby ordains that within the Public Parks, except with the prior consent of the Board, it is forbidden: —

1. To cut, break, injure, deface, defile or ill use any building, fence, or other construction, or any tree, bush, plant or turf, or any other thing or property.
2. To have possession of any freshly-plucked tree, bush or plant, or portion thereof.
3. To throw stones or other missiles; to discharge or carry fire-arms, except by members of the Police Force in the discharge of their duties; to discharge or carry fire-crackers, torpedoes, or fire-works; to make fires; to play musical instruments; to have any intoxicating beverages; to sell, offer or expose for sale, any goods or wares; to post or display signs, placards, flags, or advertising devices; to solicit subscriptions or contributions; to play games of chance, or have possession of instruments of gambling; to make orations, harangues or loud outeries; to enter into political canvassing of any kind; to utter profane, threatening, abusive, or indecent language, or to do any obscene or indecent act; to bathe or fish; to solicit the acquaintance of, or follow, or otherwise annoy other visitors.
4. To allow cattle, horses, or other animals, to pass over or stray upon the Park lands; provided that this shall not apply to

those used for pleasure travel when on the ways or places provided and open for the purpose, or to dogs when closely led by a cord or chain not more than six feet long.

5. To drive any wagon, cart, dray, truck or other vehicle for carrying merchandise or other articles, or any hearse or funeral procession.

6. To move in military or civic parades, drills or processions.

7. To play ball or other games or sports, except on grounds provided therefor.

8. To engage in conversation with men at work, or to obstruct, hinder, or embarrass their movements.

9. To refuse to obey the orders or requests of either of the Commissioners, or of the Park Police, or other agents of the Commissioners, and to refuse to assist them when required.

Any person wilfully doing either of the things above forbidden shall be punished by fine not exceeding twenty dollars.

Voted, That compliance with the foregoing regulations is a condition of the use of these premises.

Voted, That notices in the following form be posted on the Public Parks in addition to the foregoing ordinances and vote.

Pending operations for forming a Public Park on this property, it is open to be used by all persons, in an orderly way, but with due regard to the Ordinances and Regulations hereinafter recited.

All persons entering upon the Park property are hereby warned to avoid newly prepared ground and localities where works are in progress, and to promptly regard all warnings and directions of officers or other agents of the Commissioners.

CITY CHARTER AMENDMENT.

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 266.]

In the Year One Thousand Eight Hundred and Eighty-five.

AN ACT TO AMEND THE CHARTER OF THE CITY OF BOSTON.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The mayor of the city of Boston shall appoint, subject to confirmation by the board of aldermen, all officers and boards now elected by the city council or board of aldermen, or appointed by him subject to confirmation, and all whose offices may hereafter be established by the city council or board of aldermen, for such terms of service respectively as are or may be fixed by law or ordinance; and he may remove any of said officers or members of such boards for such cause as he shall deem sufficient and shall assign in his order for removal. No appointment made by the mayor shall be acted upon by the board of aldermen until the expiration of one week after such appointment is transmitted to said board.

SECT. 2. The foregoing section shall not apply to the city messenger, clerk of committees of the city council, or such other clerks and attendants as may be employed by the city council, or either branch thereof, or any subordinate officers in the several departments. The assistant assessors of taxes shall be appointed by the assessors of taxes, subject to confirmation by the mayor, and may be removed by the assessors for such cause as they shall deem sufficient and shall assign in their order for removal, and the city clerk shall be chosen by the city council by concurrent vote.

SECT. 3. No member of the city council of said city shall, during the term for which he is elected, be appointed to or hold

any office included under the provisions of either of the preceding sections.

SECT. 4. Every officer included under the provisions of either section one or two shall, unless sooner removed, continue after the expiration of his term of service to hold his office until his successor is appointed or elected and duly qualified.

SECT. 5. All officers and boards included under the provisions of section one shall appoint their respective subordinates for such terms of service respectively as are or may be fixed by law or ordinance. The said officers and boards may remove such subordinates for such cause as they may deem sufficient and shall assign in their order for removal.

SECT. 6. The executive powers of said city, and all the executive powers now vested in the board of aldermen, as such, as surveyors of highways, county commissioners, or otherwise, shall be and hereby are vested in the mayor, to be exercised through the several officers and boards of the city in their respective departments, under his general supervision and control. Such officers and boards shall, in their respective departments, make all necessary contracts for the employment of labor, the supply of materials, and the construction, alteration, and repair of all public works and buildings, and have the entire care, custody, and management of all public works, institutions, buildings, and other property, and the direction and control of all the executive and administrative business of said city. They shall be at all times accountable for the proper discharge of their duties to the mayor as the chief executive officer, whose duty it shall be to secure the honest, efficient, and economical conduct of the entire executive and administrative business of the city, and the harmonious and concerted action of the different departments. Every contract made as aforesaid in which the amount involved exceeds two thousand dollars shall require the approval of the mayor before going into effect; and no expenditure shall be made nor liability incurred for any purpose beyond the appropriation duly made therefor.

SECT. 7. The mayor shall, once a month or oftener, call together the heads of departments for consultation and advice upon

the affairs of the city ; and at such meetings and at all times they shall furnish such information as to matters under their control as the mayor may request.

SECT. 8. The heads of departments, and all other officers and boards having authority to expend money, shall annually furnish an estimate to the mayor of the money required for their respective departments and offices during the next financial year. The mayor shall examine such estimates, and submit the same with his recommendations thereon to the city council.

SECT. 9. When an ordinance, order, resolution, or vote of the city council, or of either branch thereof, involving the appropriation or expenditure of money, or the raising of a tax, and including separate items or sums, is presented to the mayor of the city for his approval he may approve some of the items or sums and disapprove others ; and in case of such disapproval the portion of the ordinance, order, resolution, or vote so approved shall be in force, in like manner as if the items or sums disapproved had never been a part thereof ; and the mayor shall return a statement of the items or sums disapproved, with his objections in writing, to that branch of the city council in which the ordinance, order, resolution, or vote originated. The items or sums so disapproved shall not be in force unless passed in the manner provided in section forty-seven of chapter four hundred and forty-eight of the Acts of the year eighteen hundred and fifty-four.

SECT. 10. All orders, resolutions, or votes of the board of aldermen of said city, which involve the exercise of any of the powers conferred by law upon the mayor and aldermen, or the board of aldermen as a separate board, and all orders, resolutions, or votes of the school committee of said city, which involve the expenditure of money, shall be presented to the mayor for his approval, and thereupon the same proceedings shall be had by the mayor and the board of aldermen, or the mayor and the school committee, as are provided in section forty-seven of chapter four hundred and forty-eight of the acts of the year eighteen hundred and fifty-four, or in section nine of this act, to be had by the

mayor and a single branch of the city council; but nothing in this section contained shall affect the powers or duties of said board in relation to votes cast at elections. The mayor shall not be a member, nor preside at any of the meetings, nor appoint any of the committees of either the board of aldermen or of the school committee.

SECT. 11. The annual salary of the mayor of said city shall be fixed by the city council by concurrent vote at a sum not less than five thousand dollars, and he shall receive for his services no other compensation or emolument whatever.

SECT. 12. Neither the city council, nor either branch thereof, nor any member or committee thereof, or of either branch thereof, nor the board of aldermen acting in any capacity in which said board may act separately under special powers conferred upon it, nor any member or committee of said board acting in any such capacity, shall directly or indirectly take part in the employment of labor, the making of contracts, the purchase of materials or supplies, the construction, alteration, or repair of any public works, buildings, or other property, or the care, custody, and management of the same, or in the conduct of any of the executive or administrative business of the city, or in the expenditure of public money, except such as may be necessary for the contingent and incidental expenses of the city council, or of either branch thereof, nor, except as is otherwise provided in sections one and two, in the appointment or removal of any officers or subordinates for whose appointment and removal provision is hereinbefore made; but nothing in this section contained shall affect the powers or duties of the board of aldermen in relation to State aid to disabled soldiers and sailors, and to the families of those killed in the civil war.

SECT. 13. All ordinances, rules, orders, resolutions, and votes of the city council of said city and of either branch thereof, and of the board of aldermen acting in a special capacity as a separate board, are annulled so far as they are inconsistent with the provisions of this act; and nothing herein shall affect the enforcement of the provisions of chapter three hundred and twenty of the

acts of the year eighteen hundred and eighty-four, being an act to improve the civil service of the Commonwealth and the cities thereof, or of the rules made by the commissioners appointed thereunder; and none of the provisions of this act, except those relating to the power of removal, shall affect the tenure of office of any person now holding any office or position in said city.

[Approved May 27, 1885.]

STATUTES OF THE COMMONWEALTH AND ORDERS
OF THE CITY OF BOSTON CONCERNING PUBLIC
PARKS AND RELATED MATTERS.

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 312.]

In the Year One Thousand Eight Hundred and Eighty-seven.

**AN ACT TO AUTHORIZE A LOAN FOR PAYMENT FOR LANDS
HERETOFORE ACQUIRED FOR PUBLIC PARKS IN OR NEAR
THE CITY OF BOSTON.**

*Be it enacted by the Senate and House of Representatives in General
Court assembled, and by the authority of the same, as follows:—*

SECTION 1. For the purpose of paying for the lands heretofore acquired by the City of Boston for public parks, the City Council of said city may, by a vote passed in the manner provided by section seven of chapter twenty-nine of the Public Statutes, authorize its treasurer to issue, from time to time, to the amount of four hundred thousand dollars, negotiable bonds or certificates of indebtedness, payable in not exceeding fifty years from their date, and bearing interest at a rate not exceeding four per centum per annum, to be denominated on the face thereof Public Park Loan.

SECT. 2. Said treasurer shall sell said bonds and certificates, or any part thereof, from time to time, and retain the proceeds thereof in the treasury of said city, and pay therefrom the expenses incurred for the purpose aforesaid.

SECT. 3. The debt and loans authorized by this act shall not be included within the limit fixed by section two of chapter one hundred and seventy-eight of the Acts of the year eighteen hundred and eighty-five.

SECT. 4. This act shall take effect upon its passage.

[Approved May 26, 1887.]

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 427.]

In the Year One Thousand Eight Hundred and Eighty-seven.

AN ACT TO ENLARGE THE AREA FOR THE PROPOSED MARINE PARK OF THE CITY OF BOSTON BETWEEN SOUTH BOSTON AND CASTLE ISLAND.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. Chapter three hundred and sixty of the Acts of the year eighteen hundred and eighty-five is hereby so amended, that the Board of Park Commissioners of the City of Boston, subject to the provisions of chapter nineteen of the Public Statutes, excepting so much of section sixteen of said chapter nineteen as requires the payment into the treasury of compensation for the rights and privileges hereby granted in land of the Commonwealth, may make such excavation and filling, and erect and maintain such structures, in and over the area of tide-water at or near Dorchester Point in South Boston, which lies south of a line drawn parallel to and three hundred feet distant northerly from the northerly line of East First street extended easterly to Castle Island, and east of the westerly line to Q street extended north-easterly to an intersection with said parallel line, and southerly into Old Harbor, as the said Board may deem necessary or desirable for the purposes of a public park in accordance with the provisions of chapter one hundred and eighty-five of the Acts of the year eighteen hundred and seventy-five.

SECT. 2. All lands of the Commonwealth which are occupied or enclosed under the provisions of this act shall be appropriated to and used solely for the purposes of a public park.

SECT. 3. This act shall take effect upon its passage.

[Approved June 16, 1887.]

CITY OF BOSTON,
IN BOARD OF ALDERMEN, Jan. 31, 1887.

Ordered, That His Honor the Mayor be requested to petition the General Court for the passage of an act authorizing the City of Boston to borrow money to be expended in payment for lands purchased or taken by the Board of Park Commissioners, under authority of chapter 185 of the Acts of 1875; the amount of such loan to be exclusive of the limit of indebtedness prescribed by chapter 178 of the Acts of 1885.

Passed in Common Council, Jan. 27. Came up for concurrence. Concurred.

Approved by the Mayor, Feb. 2, 1887.

CITY OF BOSTON,
IN COMMON COUNCIL, Feb. 3, 1887.

Ordered, That the City Treasurer be authorized to negotiate the "Public Park Construction Loan," authorized by an order of the City Council, approved Jan. 4, 1887, from time to time, in such manner as he shall deem to be for the best interests of the city, subject to the approval of His Honor the Mayor, and to issue therefor negotiable bonds or certificates of indebtedness, at not less than their par value, payable in not less than thirty years, nor more than fifty years, at a rate not exceeding three and one-half per cent. per annum. So much of said order of the City Council, approved Jan. 4, 1887, as is inconsistent with this order, is hereby rescinded.

Passed: Yeas, 65; nays, none. Sent up for concurrence. In Board of Aldermen, Feb. 7, concurred: Yeas, 12.

Approved by the Mayor, Feb. 10, 1887.

CITY OF BOSTON,
IN BOARD OF ALDERMEN, May 31, 1887.

Ordered, That the City Treasurer be authorized to borrow the sum of four hundred thousand dollars, the certificate of indebtedness to be denominated "Public Park Loan," and to be coupon bonds of the amount of one thousand dollars each, payable in gold, in thirty years, bearing interest at the rate of three and one-half per cent. per annum, payable semi-annually.

Passed: Yeas, 10; nays, none. Sent down for concurrence. June 2, came up concurred: Yeas, 58; nays, none.

Approved by the Mayor, June 4, 1887.

CITY OF BOSTON,
IN BOARD OF ALDERMEN, Nov. 14, 1887.

Ordered, That in the settlements of the suits pending between the City of Boston and the Boston & Roxbury Mill Corporation, on account of the taking of a parcel of its land for a park at the Back Bay, and the assessment of betterments for the location and laying out of said park, the Board of Park Commissioners be hereby authorized to take, by purchase or otherwise, and include in said park, two additional strips of land, fifty feet in width, running from Beacon Street to Charles River, adjoining and on either side of said parcel of land, and pay for the same with said betterments, or a part thereof; and the City Solicitor is hereby authorized to allow judgment to be entered accordingly.

Ordered, That His Honor the Mayor be hereby authorized to release to the Boston & Roxbury Mill Corporation any rights that the city may have to make any additional sluice-ways through lands bordering on the mill-dam, now or formerly owned by said corporation, except through lands now or hereafter owned by the City of Boston.

Passed. Sent down for concurrence. In Common Council, Nov. 17, 1887, concurred.

Approved by the Mayor, Nov. 21, 1887.

CITY OF BOSTON,
IN BOARD OF ALDERMEN, Dec. 27, 1887.

Ordered, That the City Treasurer in negotiating the public park construction loans, authorized by the orders of the City Council, of Jan. 4, 1887, and Feb. 10, 1887, allow a rate of interest of four per cent. per annum, payable semi-annually.

Passed: Yeas, 9; nays, 1. Sent down for concurrence. In Common Council, Dec. 29, 1887, concurred: Yeas, 55; nays, none.

Approved by the Mayor, Dec. 31, 1887.

BOSTON BAY AND HARBOR.

Boston Bay is the western end of Massachusetts Bay, and may be said to be included between Marblehead Neck and Strawberry Point. Between these two points the distance is about fifteen nautical miles, and the bay makes into the land about eleven miles. It is studded with islands and full of shoals and ledges.

Two subdivisions of the bay, in its north-western part, are known as Nahant Bay and Broad Sound, which are separated from each other by the peninsula of Nahant, and its western part is Boston Harbor. The rest of the bay forms the approaches to Boston Harbor and the smaller harbors in the vicinity.

Boston Harbor, as generally known, includes Dorchester, Quincy, and Hingham Bays, and the subordinate ports of Chelsea, Cambridge, Milton, Quincy, Weymouth, and Hingham. Its greatest length is about ten miles, and its width five miles.

The entrance to Boston Harbor is between Deer Island on the north, and Point Allerton on the south, between which two points it is three miles and three-quarters wide. From the entrance to the Main Ship Channel, the distance in a straight line to the city of Boston is about seven miles.

The space between Point Allerton and Deer Island is full of islands, through and among which lead the several channels into Boston Harbor. Of these there are six in common use, viz.: The Broad Sound Channels, called respectively the North and South Channels; Hypocrite Channel; Black Rock Channel; Main Ship Channel, and Back or Western Way,—the Hypocrite Channel and the Back Way being used chiefly by vessels bound out.

DESCRIPTION OF APPROACHES TO BOSTON HARBOR, AS SEEN FROM THE NORTHWARD.

From Flying Point, the south-western extremity of Marblehead Neck, to Phillips' Point, the north-eastern point of entrance to Nahant Bay, the direction is WSW., and the distance two miles and three-eighths; but the shoreline between these two points curves away to the northward and around to the westward, thus forming a wide cove or bay. Marblehead Beach extends from Marblehead Neck, about W. $\frac{1}{2}$ N., for five-eighths of a mile.

It is a narrow sand-beach, which separates Marblehead Harbor from the sea, and the town is visible over it. At the western end of Marblehead Beach begin the hills, which come abruptly down to the water's edge, and are from fifty to one hundred feet high. They are bare of all trees except fruit-trees, and are cleared and settled (partly by summer hotels and cot-

tages). The high land continues in a WSW. direction for a mile, to the eastern end of Phillips' Beach which extends to Phillips' Point. This beach has a general course of SW. for about seven-eighths of a mile, and for half its length stretches at the foot of a low cliff, about twenty feet high. For the rest of the distance to Phillips' Point, the land behind the beach is quite low and flat; but high wooded lands are visible in the distance.

Phillips' Point is a high rocky point, the eastern half of which is from fifty to sixty feet high, mostly cleared and cultivated, and presenting a somewhat precipitous face. The western half is about eighty feet high, and is thickly wooded. On the south-western face are many houses, some of which are seaside hotels.

NAHANT BAY.

Phillips' Point is the north-eastern point of entrance to Nahant Bay, which forms one of the smaller subdivisions of Boston Bay, and is nearly circular in form. It is contained between Phillips' Point on the north-east, and the peninsula of Nahant on the south-west. Between these two points the bay is two miles and a half wide, and about two miles long to Lynn Beach, which separates it from Lynn Harbor. The village of Swampscott is situated on the northern shore of this bay, three-quarters of a mile W. from Phillips' Point, and is a great summer resort. The eastern part of the town of Lynn occupies a portion of its north-western shores.

Fishing Point, the first headland on the northern shore to the westward of Phillips' Point, is a low, but prominent, rocky point, half a mile WNW. from Phillips' Point. It is cleared and settled, being occupied by part of the village of Swampscott. The village itself presents quite a picturesque appearance, being situated at the foot of steep wooded hills, which rise to a height of from one hundred to one hundred and fifty feet above sea-level. The rocky point upon which the main part of the settlement is built, is three-eighths of a mile above Fishing Point, and is called Blaney's Point or Blaney's Rock.

To the westward of Blaney's Rock will be seen the town of Lynn, with a long low beach, called King's Beach, extending in front of it. This beach is half a mile long, and is terminated by a low, bluff, rocky point, called Red Rock. This point is entirely bare of trees, and presents a somewhat precipitous face, — the effect of the washing of the sea.

A quarter of a mile to the westward of Red Rock begins Lynn Beach, a narrow strip of sand, separating Nahant Bay from the harbor of Lynn. It extends in a S. by W. direction for a mile and a quarter to a high bluff, rocky head, called Little Nahant. The surface of this headland (which would be an island but for the narrow strip of beach connecting it with the main) is covered with grass, and has one or two trees upon it. Its eastern face is bold

and steep, and is known as East Point, or, to distinguish it from the point of the same name to the south-eastward of it, Little Nahant East Point.

On the south Little Nahant is connected with Nahant by a strip of beach, nearly half a mile long, called Little Nahant Beach.

Nahant lies nearly E. and W., and is very irregular in shape. It is a high rocky peninsula, with a precipitous face to the eastward, and a mile and a half long. It is occupied by a settlement which is mainly composed of summer cottages. Its eastern extremity is called East Point, and is a bluff headland (called Nahant Head). The roads over the peninsula are planted with trees, which in summer present a beautiful appearance when seen from the southward.

Nahant is a great summer resort, and steamers ply regularly between it and Boston during the season. The landings are on the southern side, in the large cove formed by the curve of the southern shore, which is sometimes called Nahant Harbor.

Seven-eighths of a mile NNE. from East Point is a bold rocky islet, sixty feet high, called Egg Rock. It is irregular in shape, lies nearly E. and W., is an eighth of a mile long, and on its summit is built the light-house, which is a guide to Swampscott Harbor. It rises from the keeper's dwelling (a square white cottage, twenty-five feet high), and shows a fixed red light, of the fifth order of Fresnel, from a height of eighty-seven feet above sea-level, visible twelve miles.

BROAD SOUND.

The entrance to Broad Sound is between Nahant and the bare rocky islets, called The Graves, which lie in a N. by E. and S. by W. direction outside of Green Island, and are very dangerous bare rocks, united into one ledge at low water, forming a group six hundred yards long.

Broad Sound lies NW. and SE., is about five miles wide between Deer Island and Nahant, and about six miles long. At the head of the Sound is Lynn Harbor, the entrance to which is contained between Bass Point (on Nahant) and Chelsea Beach. On the east Broad Sound is separated from Nahant Bay by Lynn Beach, Little Nahant, and Nahant; and its northern shores are occupied by the city of Lynn, one of the great manufacturing towns of New England. On the west the boundaries are the famous Chelsea Beach (sometimes called Revere Beach), which, beginning at Pines Point, three-quarters of a mile to the south-westward of Lynn, runs in a SW. direction for nearly three miles, and is not quite a hundred yards wide. The land behind it is salt-meadow, into which the firm ground extends like spurs; and here and there over the surface of this marsh appear groves of oak and pine trees, which will distinguish this part of the Sound from other parts of the

bay, when viewed from seaward. (Many summer hotels and cottages now occupy the shore.)

At Pines Point, Chelsea Beach is a hundred yards wide; but back of the shore is a meadow, and behind that a grove of pine-trees, which give the name to the point. This point is on the southern side of the entrance to Chelsea Creek and Saugus River, both of which are shallow estuaries.

The settlement called Centre Village (now Revere) occupies the high land back of the southern end of Chelsea Beach.

Deer Island, which separates the entrance to Broad Sound from Boston Harbor, lies NNW. and SSE., is nearly a mile long, and a third of a mile wide, at its widest part. To a vessel approaching from the north-eastward it will appear as a long bare island, with a gently-sloping green hill having a flag-staff on its summit towards its eastern end; and this hill appears joined to another to the westward, which has a precipitous descent to seaward. The House of Industry, with its high cupola, appears on the western end of the island. On the eastern side of the hill, in the centre of the island, is a life-boat station, established by the Massachusetts Humane Society. Both the northern and southern ends of Deer Island are low, and covered with grass only; and there are no trees except those planted for ornamental purposes. On the north a channel, eighty yards wide, separates Deer Island from a low, sandy point of the mainland, called Point Shirley. This passage is known as Shirley Gut, and is sometimes used by the steamers plying between Boston and Nahant.

Point Shirley is the south-western extremity of a very long and narrow peninsula, mostly sand-beach, which extends in a S. $\frac{1}{2}$ W. direction from the mainland to the southward of Chelsea Beach. The point itself forms a sort of flat head to this peninsula, lies NW. and SE., and is half a mile long and about a fifth of a mile wide. Taft's Hotel is situated on this point.

Winthrop's Head is a precipitous headland, a hundred feet high, and bare of trees, situated half a mile NNE. from Point Shirley, and on the western side of the entrance to Broad Sound. The road from Point Shirley to Winthrop leads around the western side of this hill. To the northward of this head runs a sand-beach an eighth of a mile wide and half a mile long to the mainland, about a mile to the southward of Grover's Cliff which is the most prominent point between Point Allerton and Nahant Head, and lies one and a fifth miles N. by E. from Winthrop's Head. It is backed entirely by marsh, but the point itself is a precipitous headland, eighty feet high, and bare of trees.

From Grover's Cliff the shore-line runs about N. $\frac{1}{2}$ W., for three-quarters of a mile, to the southern extremity of Chelsea Beach; and midway, between this point and Grover's Cliff, is a hill a hundred feet high. The whole shore is bare of trees, but the hills are usually grassy, and in many places are groups of summer cottages. The summit of the hill on the western end of

Breed's Island appears (when viewed from the eastward) over the sand-beach and marsh which separate Grover's Cliff from the hills to the northward. The summit of this island is a hundred and fifty feet above the sea, and there are some few scattered trees, near the base of the hill, on the eastern side; but it is, for the most part, treeless and under cultivation.

To the northward of Breed's Island will appear Powder-horn Mountain, a hundred and eighty feet high, and the houses in the village of Winnissimmet (now Chelsea) will show over the low shore between the two hills.

LYNN HARBOR.

On the northern side of Broad Sound are situated the harbor and city of Lynn. The land is low and marshy from the northern bank of Saugus River nearly across the head of the harbor, and it is also much cut up by coves and slues penetrating the marshes in every direction. In the north-eastern corner of the head of the harbor the line of marsh is narrow, and the wharves of the town extend over this marsh to the water's edge.

Lynn is chiefly celebrated for its shoe factories. The railroads have, however, all of the transportation, and the harbor is very little used.

The entrance to Lynn Harbor is between Chelsea Beach on the west and Bass Point, the western point of Nahant, on the east. It is two miles wide, but is so full of rocks and shoals as to leave only very narrow and shallow channels of approach, available only for light-draught vessels. The eastern shores are formed by Lynn Beach, the peninsula of Little Nahant, and Nahant.

Bass Point, the south-western point of Nahant, is quite low, but high land is seen behind it. From this point the shore-line runs N. $\frac{1}{2}$ E. for a third of a mile to the West Cliffs, which, as their name implies, show an abrupt and precipitous face to the westward and are bare of trees.

A quarter of a mile N. $\frac{1}{2}$ E. from West Cliffs is the north-western end of Nahant, called Black Rock Point. The shore is low at this point, with high land behind it to the eastward. Six hundred yards (a third of a mile) NE. $\frac{2}{3}$ N. from this point begins Little Nahant Beach. Little Nahant appears to the northward of the beach, and is half a mile above Black Rock Point; and presents, when viewed from the southward and westward, a regular and gradual slope from the water's edge to a height of from eighty to ninety feet. The road to Lynn winds along the beach at its foot. Lynn Beach forms the rest of the eastern shore of the harbor, extending from Little Nahant to the mainland, a distance of a mile and a quarter.

The city of Lynn occupies the northern shore of the harbor. On the south and south-west the town is bounded by extensive salt-marshes, which occupy the shore for distances varying from a quarter of a mile to a mile and a quarter back from the shore-line; but the settlements have gradually en-

croached upon this extensive tract. On the south-west these marshes extend to Saugus River, which empties into Lynn Harbor between Tree Point (sometimes called Sow Point) on the north and Pines Point on the south. The entrance to this river is a quarter of a mile wide, but the channel is very narrow, and the best water is close under Pines Point. Four feet at mean low water may be carried up to the bridge of the Eastern Railroad.

Bayley's Hill, which is a prominent landmark for Nahant Harbor, is a bluff steep head, about sixty or seventy feet high, situated on the southern side of Nahant, five hundred yards E. from Bass Point, and is bare of trees. It lies on the western side of Nahant Harbor, so called.

THE BROAD SOUND CHANNELS.

Besides Shirley Gut there are two channels leading into Boston Harbor from Broad Sound. The westernmost of these, which passes within less than half a mile of Deer Island, is called the North Channel. It is shoal and full of dangers, and is not fit for strangers. The eastern channel is called the South Channel, and is almost universally used by coasters of all sizes coming into Boston from the northward and north-eastward.

The North Channel leads across Great and Little Faun bars, and is never used except by vessels of light draught. Its entrance is just to the westward of the entrance to the South Channel, and its course about SW. by W. $\frac{1}{2}$ W. Vessels of lighter draught than ten feet, however, often bring Long Island Light-house to bear SW. by W. and run for it, which carries them safely across. Thirteen feet at mean low water can be carried across the two bars, but the channel is narrow and unsafe for strangers unless of very light draught. A shoal with ten feet lies to the eastward of Little Faun Bar buoy, and about two hundred and fifty yards from it.

The South Channel, which is easy of access and has plenty of water at half-flood for vessels of the largest draught, comes into Broad Sound to the westward of Green Island. It is short and straight, its range is perfect, and strangers may resort to it with safety. The course is SW. by W. $\frac{1}{2}$ W. for Nix's Mate Beacon until past Ram's Head buoy. Then the channel turns to the westward and runs between Deer Island and Long Island into President's Roads.

Vessels of light draught often steer SW. by W. for Long Island Light-house, crossing the shoals between the North and South channels. When coming from the vicinity of Cape Ann and intending to enter by the South Channel, the course is SW. by W. for Long Island Light-house until Egg Rock Light-house bears N. by E. $\frac{3}{4}$ E., then steer to the southward until Nix's Mate Beacon is on with the middle of the northern and highest part of the Blue Hills, which is the range for the channel. From this position the entrance is easily recognized by a stranger, on referring to the view.

The channel will appear open between Long Island Head and a long high island with a gently-sloping green surface, bare of trees, but having a flag-staff on its summit near its eastern end. Long Island Head is easily recognized by its bold, bare, precipitous face, on which the light-house and keeper's dwelling are seen. The other island with the gently-sloping hill is Deer Island. The hill on Deer Island appears to be joined to another at its northern end, which has an abrupt descent, forming a precipitous face. Over this high bluff will appear the public buildings. Both hills are on Deer Island, — the lowland connecting them not being visible at this distance.

To the northward of Deer Island will be seen the open entrance to Shirley Gut; and the low sandy point, with houses upon it, which lies on the northern side of the opening, is Point Shirley. If the day be clear, Fort Winthrop on Governor's Island may be seen over the northern end of the point, appearing as a square earth-work on a high smooth hill. To the northward of Point Shirley the high bare cliff which rises from the water, appearing like an island, is Winthrop's Head. It is joined to Point Shirley by a strip of beach not visible at this distance. The city of Boston, with the dome of the State House in the centre, will show to the northward of this head.

If the day be clear there may be seen in the distance, towering above the low hills that are visible to the northward of the city, a slim shaft or tower, looking like a tall gray chimney. This is Bunker-Hill Monument. Some distance to the northward will appear a high bare cliff apparently rising from the water. This is Grover's Cliff, at the southern end of Chelsea Beach. Beyond this the land runs away towards Lynn, and then around to Nahant Head.

To the southward of Deer Island will be seen Long Island; then Lovell's Island in range with Gallup's Island; then the white walls of Fort Warren in the distance; then Green Island and Little Calf Island at the entrance to Hypocrite Channel; then the high, bare, precipitous head of the Great Brewster, presenting a very singular appearance; then Middle Brewster, showing as a bare rocky island, and behind it Nantasket Hill, with a couple of steeples rising above it; and Boston Light-house will be in range with the eastern end of the Middle Brewster.

The channel being open from the above bearing, the course for Nix's Mate will lead safely in.

HYPOCRITE CHANNEL.

This is the first channel to the southward of the Broad Sound Channels. Its entrance lies between Green Island on the north and Little Calf Island on the south, and is three-eighths of a mile wide; but the channel itself is but three hundred yards wide between the curves of eighteen feet at low water, and is not recommended for strangers. Vessels entering by this channel pass to the northward of The Brewsters.

From Green Island the channel continues to the westward about a mile and a half to what is called Ram's Head, where it joins the South Channel of Broad Sound, and then nearly a mile farther to the westward towards Long Island Head, joining the Main Ship Channel off Nix's Mate. There is not less than three and a half fathoms water throughout its entire length, but there are a good many sunken ledges, some of which are not buoyed.

A vessel coming from the eastward and intending to enter this channel should, when in thirteen and a half fathoms, bring Boston Light-house to bear W. by S. $\frac{1}{2}$ S., and Egg Rock Light-house NNW. The entrance will then bear nearly W., and will appear as follows:—

On the southern side of the entrance the nearest land will be the Outer Brewster, which will appear quite differently from its description as given in the approaches to the Main Ship Channel. It will look much smaller, as this view is end on, and the high bare cliff on the northern end of the Great Brewster will show just clear of it to the southward.

The low grassy island with its southern end on with the Outer Brewster is Calf Island. It is about thirty feet high at its northern end, appears somewhat undulating in outline, is bare of trees, and has only one or two houses upon it, which are close to the southern end, and are not seen unless the island is open to the northward of the Outer Brewster. This southern end is only ten or fifteen feet high.

Calf Island lies off the western end of Middle Brewster, from which its southern end is distant a little over three hundred yards, with a shoal passage between them unsafe for strangers. The island lies N. and S., and is a little over six hundred yards long. From the point of view above mentioned the northern end will bear W. $\frac{1}{4}$ S., distant three miles and an eighth.

To the northward of Calf Island, and bearing W., will appear a little island about the same height as Calf Island, and also bare of trees. This is Little Calf Island, lying on the southern side of the entrance to Hypocrite Channel, and about one hundred yards in diameter. From Calf Island it lies NE. by N., an eighth of a mile distant, and there is no passage between them.

To the northward of Little Calf Island (and the most northerly of the islands visible from this point of view) will appear a small island of moderate height, having an undulating surface and faced by whitish-looking rocks on its eastern side. This is Green Island. It lies on the northern side of the entrance to this channel, bears about W. $\frac{1}{2}$ N., and is in range with the high land in the middle of Deer Island, the high cliff on the north-eastern face of the latter appearing just to the northward of Green Island. It is bare of trees, lies nearly N. and S., and is an eighth of a mile long. From The Graves it bears WSW., one mile and a quarter, and from the eastern end of Outer Brewster NW. $\frac{1}{2}$ N., one mile distant.

From the southern extremity of Green Island extends a line of bare rocks in a SW. by W. direction, about three hundred and fifty yards — its southern end marking the northern side of the entrance to Hypocrite Channel.

Just clear of Green Island, to the northward, will appear the public buildings on Deer Island, and north of these the other large buildings on Point Shirley, with the city of Boston in the distance behind it. North of Point Shirley the high cliffs of Winthrop's Head and Grover's Cliff will appear. As the low land between these heads will not show at this distance they will look like islands.

On entering Hypocrite Channel the southern point of Deer Island will appear ahead as a long, gently-sloping green hill, having a flag-staff on its summit, and the square red pyramidal beacon to the southward of it is Deer Island Point Beacon. This beacon is on Deer Island Point, and vessels must pass to the southward of it.

A little to the southward of Deer Island Point Beacon will be seen in the distance North Spectacle Island, showing as a smoothly-outlined hillock with precipitous faces, and next to this the high cliff of Long Island Head, with the light-house and keeper's dwelling on the summit. Nearly in range with the Almshouse on Long Island, and a little to the southward of the Head, Nix's Mate Beacon may be seen; and the northern end of Lovell's Island will mark the southern side of the passage.

This is the appearance presented by the South Channel when viewed from the entrance to Hypocrite Channel, between Green and Little Calf islands.

DESCRIPTION OF APPROACHES TO BOSTON HARBOR AS SEEN FROM THE SOUTHWARD.

A mariner coming from the vicinity of Cape Cod, and bound to Boston, will notice, as a most conspicuous object on approaching the shore, a tall gray light-tower, apparently standing in the water at some distance from the land. This is Minot's Ledge Light-house, built on the outermost of the Cohasset Rocks, on what is called the Outer Minot, a ledge bare at low water. The tower is of granite, with a bronze lantern on top. It is one hundred feet high, and shows a fixed white light, of the second order of Fresnel, from a height of ninety-two feet above the sea, visible sixteen miles.

From Minot's Ledge to the shore lie the Cohasset Rocks, a great number of sunken and bare ledges, through and among which winds what is called the Gangway passage. Strangers must never attempt to pass in-shore of the light-house. Many of the ledges are not buoyed, and among those that are so marked a stranger would certainly get confused and run ashore.

Strawberry Point, the most easterly point of Boston Bay, lies one mile SW. by S. from Minot's Ledge Light-house, and marks the southern limits of the bay. It will appear, on approaching Minot's Ledge, as a low grassy point, with groups of houses here and there upon its surface, and among them a large hotel. Partly wooded hills will be seen behind the point and to the eastward of it. The deep cove which opens on the western side of the

point, on passing to the westward of the light-house, is Cohasset Harbor. The southern shores of this harbor are low, but there is high land back of them, which, showing over the low land, gives the appearance of a hilly country. The western shores are hilly and partly wooded, and the town of Cohasset is situated at the foot of these hills.

Passing to the westward, the country will be found quite hilly and wooded. Sand hillocks are also seen here and there near the beaches. The shoreline is much cut up by coves and indentations, and small islets lie at intervals along the shore.

Half a mile to the north-eastward of Cohasset Entrance is a strip of sand-beach about three hundred and twenty-five yards long, which occupies what was formerly the entrance to a large cove of irregular shape, now known as Old Harbor. The beach having formed across the entrance makes of the former cove a pond.

A little over a mile and a quarter WNW. from Cohasset Entrance is an oblong hill fifty feet high, bare of trees and covered with grass, called Green Hill. Two bare rocky islets, called the Black Rocks, lie NE. by E. from this hill from a quarter to half a mile off. There is no passage between them and the hill. A life-boat station, established under the auspices of the Massachusetts Humane Society, lies ESE. from Green Hill, distant half a mile.

From Green Hill to the westward, a low shore is passed, bounded by a narrow strip of sand-beach, behind which extend large salt-meadows. The higher and wooded lands lie still farther back, in no place approaching the beach nearer than three-eighths of a mile. This low shore extends from the base of Green Hill, a little over half a mile in a NW. by W. direction, to the foot of a group of bare hills, called the Rockland Hills, separating the low lands between them and Green Hill from the great Nantasket Beach, which begins at the foot of their western slopes and extends in an unbroken line two miles and three-quarters NNW. to the base of Point Allerton.

The Rockland Hills are from eighty to ninety feet high and bare of trees. Two large summer hotels, the Atlantic and the Rockland houses, are built upon their summits, and serve to distinguish them.

When abreast of these hills the beacon on Harding's Ledge will be plainly discernible to the northward, and about a mile off. It is an iron spindle, painted black, and carrying a day mark consisting of a ring or wheel four feet in diameter, set horizontally, with twelve wooden pendants attached to the rim. The bell-buoy will appear a little to the eastward of the spindle.

Nantasket Beach, as before mentioned, extends in a NNW. direction to Point Allerton. It separates a large shallow bay, called Hingham Bay, from the ocean, and is at no point more than half a mile wide. Several grassy hills rise at intervals just back of the beach, the most prominent of which are Sagamore Head, White Head, and Strawberry Hill.

Sagamore Head is grassy, eighty feet high, and has several houses upon

it. Four hundred yards to the northward of it rises White Head, a bare hillock, only forty-five feet high. Three hundred yards N. of White Head there is a hut of refuge, established by the Massachusetts Humane Society. Nearly a mile farther to the northward rises a smooth green hill, bare of trees, and showing a single house upon its summit. This is Strawberry Hill, and is one hundred feet high. At its base is another life-boat station, established by the same society.

The high bare cliff seen to the northward of Strawberry Hill is Point Allerton, the southern point of entrance to the Main Ship Channel. The land, rising abruptly from the water to a peak, then descending to a small low valley, and then rising again to a height of one hundred and fifteen feet, forms a head of very peculiar appearance. The southern part of the point is a round hill, bare of everything except grass, and with perpendicular faces. There is a life-boat station in the valley between the northern point and the high cliff to the southward, and a hut of refuge on the beach, three hundred and twenty-five yards from the base of the hill. (Many summer cottages are now built along the shore and on the hills.)

On passing Harding's Ledge Beacon, Boston Light-house will be seen directly ahead and on with the southern end of a remarkable looking island, which looks like Point Allerton, except that the high, round hill is at its northern end, and the sharp peak, like the pommel of a saddle, at its southern end; but the perpendicular cliffs and the grassy surface are exactly similar to those on Point Allerton. This is the Great Brewster. (See View of Main Entrance.) So exactly similar has been the action of the sea on this island and Point Allerton that they appear as if they had formerly been joined together and afterwards separated by some great convulsion of nature.

To the eastward of the Great Brewster will appear two bare rocky islands, lying nearly E. and W. of each other. These are the Middle and Outer Brewsters. They are merely masses of black rock from fifty to sixty feet high, lying on the northern side of the Main Entrance.

The City of Boston, with the dome of the State House rising above the rest of the houses, will be seen in the distance to the westward of the light-house. The two bare islands just to the left are Lovell's Island and Gallup's Island; and Fort Warren is plainly visible just to the northward of Point Allerton.

MAIN SHIP CHANNEL.

The entrance to this channel is between Light-house Island on the north, and Point Allerton on the south, and is a mile and an eighth wide; which width it holds for a little over a mile and a quarter, when it contracts at the Narrows to a little more than a quarter of a mile. The course is first about W. for a mile and an eighth; then NW. through the Narrows, between Narrows Light-house (on Spit Bar) and George's Island (on which Fort Warren

is built); then NW. by N. between Lovell's Island and Gallup's Island for three-quarters of a mile, until up with Nix's Mate Beacon; then NW. towards Deer Island, joining the Broad Sound Channels; then W. $\frac{1}{2}$ N. through President's Roads, passing to the southward of Deer Island and to the northward of Long Island and the Spectacle Islands; and then between NW. $\frac{1}{2}$ N. and NW. by W. up to the city, passing between Governor's Island on the north and Castle Island on the south. The whole distance by this channel from the entrance to the anchorage off the city is seven and a half nautical miles.

On approaching Boston Main Entrance from the northward or eastward, the first prominent object met with will be the Outer Brewster, a bare rocky island, the easternmost of the group lying on the northern side of the Main Ship Channel.

The Outer Brewster is a mass of black rock, presenting a very rugged appearance, and destitute of all vegetation. It lies E. and W., is about a third of a mile long, sixty feet high at its highest part, and its shores are bold-to; but there are outlying reefs to the eastward of it. There is a solitary house on the northern side.

About three hundred yards to the westward of Outer Brewster lies Middle Brewster, separated from the former by a narrow and dangerous passage called Flying Place, which is full of shoals and unfit for strangers. Middle Brewster lies E. and W., is a third of a mile long and about fifty feet high. It is a mass of bare rock, destitute of vegetation, but presenting a somewhat less rugged appearance than that of the Outer Brewster. A spit or reef makes out in a SW. direction from its western end, and a similar bar extends in a NE. direction from the Great Brewster, nearly meeting the former, and leaving a very shallow passage, a hundred and fifty yards wide and full of shoals, between the two bars. It is only available at high water, and then only by those well acquainted with the dangers.

When nearly up with the Outer Brewster, and bound in by the Main Ship Channel, there will be seen to the southward of that island and to the eastward of Boston Light-house, a group of bare rocky islets stretching in an E. and W. direction. These are the Shag or Egg Rocks. They lie on the northern side of the entrance to the Main Ship Channel, half a mile to the southward of the Brewsters, and the same distance to the eastward of Boston Light-house. The rocks are from twenty to twenty-five feet above high water, extending in an E. and W. direction for a third of a mile, and are pretty bold-to.

Three hundred yards W. of the western end of the Egg Rocks, and on the northern side of the entrance, will be seen a low rocky islet of irregular shape, upon which stands a large light-tower with its accompanying dwelling-house and bell-tower. This is Light-house Island (sometimes called Little Brewster Island), and the tower is called Boston Light-house. It is a circular

tower of rough stone, eighty feet high, with a black lantern on top, from which is shown a revolving white light, of the second order of Fresnel, from a height of one hundred and eleven feet above the sea. The flashes are at intervals of half a minute, and the light is visible in ordinary weather seventeen miles. Connected with the light-house is an air-trumpet for foggy weather, giving blasts seven seconds long at intervals of forty-three seconds.

About eight hundred yards NNW. of Light-house Island (with which it is connected by a long bar or sand-spit, bare at low water) lies a very peculiar-looking island, about a hundred feet high, and presenting a precipitous face to seaward. This is the Great Brewster. Its very remarkable shape renders it a landmark not to be mistaken, but this shape can be more readily explained by a reference to the view of the Main Entrance. This island lies nearly NE. and S.W., and is three-eighths of a mile long. Its northern point is high and steep, and the land gradually rises toward the southward, attaining its greatest height about half-way between the northern and southern points. It then descends regularly almost to a level with the water, and again rises with an equal regularity to the southern point, which is nearly as high as the northern end. The whole of this sea-face is a precipitous water-worn cliff. The summit is smooth and grassy, but bare of trees.

From the south-western end of the Great Brewster a long, dry sand-spit or bar extends to the westward for three-quarters of a mile, to the Narrows. This is called Spit Bar, or Brewster Bar.

Point Allerton, on the southern side of the Main Entrance is a very conspicuous headland. It presents an appearance exactly similar to the Great Brewster (except that the northern end of the point is the lower), and its highest point is about midway between its northern and southern ends. It is a bare hill, one hundred and fifteen feet high, presenting a steep water-worn cliff-like face to the eastward. Its northern point being separated from the main hill by low land (as in the case of the Great Brewster) gives a very peculiar appearance to the head. (See view of Main Entrance.) The summit of Point Allerton is grassy, but bare of trees, and the sea-face is protected by a wall of granite.

At Point Allerton the southern shores of the Main Entrance turn abruptly to the westward. A narrow strip of beach, known as Stony Beach, half a mile long and forty yards wide, connects the western end of the hill with the high land of Hull. This land is formed by two or three regularly sloping hills, from one hundred to one hundred and twenty-five feet high, called Nantasket Hills. They are covered only with grass. On the highest there is an ancient earth-work of considerable size, and the remains of a redoubt may be discerned on the summit of the other. The lower hills present perpendicular cliff-like faces on their northern sides.

The village of Hull is built on the south-western sides of these hills. From seaward, parts of it may be seen, but after entering the harbor the hills

hide all but one or two of the highest steeples until to the westward of the cliffs and approaching Hull Gut, when the village will appear over the low land.

On the northern side of the channel, to the westward of Great Brewster, lies Spit or Brewster Bar; and on the western extremity of this bar will be seen an iron screw-pile light-house, called Narrows Light-house. It shows a fixed red light, of the fifth order of Fresnel, from a height of forty-six feet above the sea, and is visible ten miles. The light-house is painted brown.

Spit Bar, about three hundred yards E. of Narrows Light-house, sends off an arm in a south-easterly direction for an eighth of a mile, on the end of which is built a granite beacon surmounted by an iron spindle and cage, all painted red. This arm is False Spit, and the beacon is False Spit Beacon. In coming up the Main Ship Channel, when abreast of this beacon haul up to the north-westward to pass through the Narrows. This course leaves Narrows Light-house to the eastward, and a low island, entirely occupied by a granite fort, to the westward. This island is George's Island, and the fort is Fort Warren. The island lies N. by W. and S. by E., is three hundred and fifty yards wide, and a little over six hundred long. It is altogether occupied by the fort, which is a casemated granite work, surmounted by traverses of earth, and faced by earth-work water-batteries. The citadel or central house of the fort, which appears above the parapet when approaching it closely, is a mile and three-quarters W. $\frac{1}{2}$ S. from Boston Light-house. Boston is six miles (by the channel) above Fort Warren.

The Black Rock Channel here opens to the north-eastward, between Narrows Light-house and Lovell's Island. This island lies on the eastern side of the Narrows, a quarter of a mile to the north-westward of Narrows Light-house, and the same distance to the north-eastward of Fort Warren. It is very irregular in shape, and not over thirty or forty feet high in its highest part, which is near the centre. Its length is a little over half a mile, and its width varies from two hundred and fifty yards (at its southern end) to five hundred (near the middle).

Lovell's Island lies NW. and SE., and is bold-to on its south-western side; but its eastern and northern shores are obstructed by long ledges and extensive flats. There are two or three buildings and a wharf used by the United States Government for a buoy station on the south-western shore, near the northern end of the island.

On the western side of the channel, and directly opposite Lovell's Island, is Gallup's Island, narrow and bare of trees, and with a somewhat precipitous face on its northern side. It lies nearly E. and W., is over eight hundred yards long, and not quite three hundred wide near its western end, where it is widest. Its eastern end is a low, narrow sand-point. The cliff and sea-face of this island are protected from the action of the water by a granite sea-wall nearly a mile long. There is a group of buildings and a wharf used for

Quarantine purposes on the southern side of the island, but they are not visible from the Narrows.

From the western end of Gallup's Island shoal water extends in a northerly direction for three-eighths of a mile. On this is built a large black beacon, called Nix's Mate Beacon, which will be seen a little open to the westward when passing between Lovell's and Gallup's islands. It is a pyramidal granite beacon, painted black, having eight sides, and stands upon a large square granite base, — marking the centre of Nix's Mate Shoal and the junction of the Main with the Broad Sound Channels.

When nearly up with Nix's Mate Beacon the course is NW. for another square granite pyramid, painted red. This is on the northern side of the Broad Sound Channels, and is called Deer Island Point Beacon. It is built on the extreme southern point of Deer Island, which is covered at one-third flood. Preparations are being made by the United States Government to place a light-house on this point.

The large island a little open to the eastward, which shows as a bare, green smoothly-sloping hill, somewhat broken at its westward end by water-worn cliffs, is Deer Island. The wharf at Point Shirley and some of the houses on that point are just visible to the westward of the cliffs.

On coming abreast of Nix's Mate, Deer Island Beacon will come in range with a low island about two miles and a half off, and having several large spreading trees upon it. This is Apple Island. It is circular in shape, of moderate height, and about an eighth of a mile in diameter; lies midway between Point Shirley and Governor's Island, and is surrounded by flats. The range of this island and Deer Island Beacon is one of the Main Ship Channel marks.

After passing Nix's Mate the channel turns to the westward between Deer Island Beacon on the north, and a high, precipitous head, with a light-house on it, on the south. This head, which shows a steep, water-worn cliff to the northward and eastward, is called Long Island Head, and is the northernmost point of Long Island, which lies on the southern side of the main channel, and is about a mile and a half long, and from one hundred and fifty to six hundred yards wide. It extends in a NE. and SW. direction, with an undulating surface, and is bare of trees except in the neighborhood of the city almshouse.

From the middle of the channel, after passing Nix's Mate, this island will appear as a round hill, about eighty feet high, with perpendicular faces; in other words, only Long Island Head will show, the rest of the island being hidden by it. On the summit appear the light-house and keeper's dwelling, and the top of the almshouse building shows over the hill.

The light-house on the Head is an iron tower, painted white, twenty-seven feet high, and shows a fixed white light, of the fourth order of Fresnel, from a height of one hundred and twenty-one feet above the sea, visible sixteen miles.

Seen from the southward and eastward, Long Island presents quite a different appearance from that just described. Its full length and undulating surface is then seen, and will be described in its proper place.

On passing the head a granite sea-wall will be seen facing it. It is of great strength, and is twenty-one hundred feet in length.

Passing Long Island Head, the channel continues to the westward, through what is called President's Roads; and to the southward of the course will appear two islands of moderate height, with perpendicular faces, and lying N. and S. of each other. These are Spectacle Islands, or The Spectacles, as they are commonly called. They lie close together, and at low water are joined by a dry sand-bar. The northern island lies nearly E. and W., is seven hundred yards long and sixty-five feet high, with cliff-like faces, worn by the action of the water. The southern island is nearly square, being four hundred and fifty yards in diameter. It is sixty-five feet high at its highest point, and, like the northern island, its faces are precipitous except on the southern side, where the shore is low and sandy.

The Spectacles lie on the eastern side of the entrance to Back or Western Way. There is a passage between these islands and Long Island, often used by coasters, but it is unsafe for strangers. The water is shoal except on their northern side.

When past the Spectacles, on the way through President's Roads, a large island, presenting a precipitous face to the northward, and having a group of large houses on its summit, will open to the westward of them. This is Thompson's Island, which lies off the entrance to Neponset River, and on the western side of entrance to Back or Western Way. The island lies ENE. and WSW., and is a mile long. The group of buildings visible on its highest point, surrounded by ornamental grounds, is occupied by a Farm School. They stand near the middle of the island, where the land rises to a height of seventy-five feet. It is this group of buildings that is seen from the Main Channel, showing between the Spectacles. Nearly all the rest of the island is low land.

When fairly past the Spectacles the channel turns to the north-westward, and passes between Governor's Island on the north and Castle Island on the south.

Castle Island, easily recognized by Fort Independence, which is built upon it, is a small low island, lying about half a mile to the eastward of Dorchester or City Point and about a mile NW. of the Spectacles. The fort, which occupies the whole of the island, is a regular work, built of granite, and surmounted by sod traverses. There is a passage between Castle Island and Dorchester Point, but it is not safe for strangers. The shore of the island on the channel side is protected from the action of the sea by a strong sea-wall.

Governor's Island lies on the northern side of the channel, a little over

half a mile from Castle Island. It is of irregular shape, about half a mile long, and about seventy feet high at its highest point. The hill at its western end is covered with earth-works, known as Fort Winthrop. The south-eastern part of the island is much lower, and has a few small water-batteries near the shore. Flats extend from it in an ESE. direction for one mile, and are bare at low water; but an excellent channel, in which there is not less than three fathoms at low water, leads between it and Apple Island.

President's Roads, a wide and good anchorage, forming the Middle Harbor of Boston, is contained between Governor's Island Flats and Apple Island Flats on the north, Deer Island on the east, Long Island and the Spectacles on the south, and Castle and Governor's islands on the west. It is, within these limits, a mile and three-quarters long and nearly three-quarters of a mile wide.

To the westward of Governor's and Castle islands lies the Inner Harbor, which includes all that portion which lies abreast of the town up to Charlestown wharves.

South Boston, a large, high, and well-settled peninsula, forms the south-eastern extremity of Boston. It lies E. and W., and is two miles long. Its eastern end is called Dorchester or City Point. Houses are thickly clustered over the whole surface of the peninsula, and upon the highest point is a very conspicuous building with a cupola. This is the Blind Asylum, and is one of the marks for coming in by the Hypocrite Channel.

On the southern side of Dorchester Point is Dorchester Bay, which forms the approach to Neponset River, Thompson's Island forming the eastern side of the bay. On the west, low marsh-lands join the peninsula to the mainland at Dorchester. On the north and north-west, South Boston is separated from Boston proper by a narrow but deep channel, called Fort Point Channel, which leads into South Bay.

The city of Boston is built upon a peninsula which extends from the mainland in a NE. direction. This peninsula lies between Fort Point Channel and Charles River, the city being washed on three sides. Immediately opposite to the north-eastern extremity of Boston, and on the northern side of the Inner Harbor, lies East Boston, built on Noddles Island. This island was originally composed of salt-meadow, except at its ends, where the land is higher; but large portions of it have been reclaimed and built upon. The island lies on the eastern side of the harbor, and is separated from Charlestown by the Mystic River, and from the city of Chelsea by a narrow and shallow stream, called Chelsea River. Bridges connect it with the mainland to the northward.

Between Charlestown and East Boston is the confluence of the Charles and Mystic Rivers. The former runs to the eastward between Cambridge, East Cambridge, and Charlestown on the north, and Boston on the south. Its channel is very intricate and narrow, and is crossed by several bridges. The

Mystic takes its rise at Medford, three miles and a half above its mouth, and flows through a very crooked channel, but with a general direction about SE. to the eastern extremity of Charlestown. Here it is crossed by a bridge, called Chelsea Bridge, connecting Charlestown with Chelsea. At the bridge the Mystic runs about SSW. and joins the Charles at its junction with the Inner Harbor.

The United States Navy Yard occupies nearly all of the eastern shore-line of Charlestown. It is very conspicuous on account of its large ship-houses, foundries, smoke-stacks, and large granite buildings.

The Inner Harbor is irregular in shape, and has extensive flats, but a deep channel. It is about two miles long, and at its widest part, just off South Boston, is a mile in width; while at its narrowest, between Boston and East Boston, it is only a quarter of a mile wide. Extensive flats fill the large bight between South Boston and the eastern extremity of Boston proper, and are called South Boston Flats. These flats are now being reclaimed and built upon, extending the wharf-line to the edge of the channel; and when this is done the Inner Harbor will in no place have a greater width than half a mile.

GOVERNOR'S ISLAND CHANNEL.

This channel, which is only fit for steamers, begins at the eastern end of Governor's Island Flats, and runs in a WNW. direction, between Governor's Island and Apple Island, for a little over a mile and a half; then, turning abruptly to the southward, it runs between Bird Island and Governor's Island into the Main Channel, which it joins a little above the Upper Middle. It is crooked at its western end and narrow at both ends; but a steamship can carry not less than nineteen and a half feet, at mean low water, throughout its entire length up to the East Boston wharves. It is very well buoyed, there being but one danger left unmarked.

BACK OR WESTERN WAY.

This channel is used on the ebb, in light winds, to avoid being set out into the Sound at Nix's Mate, or into Black Rock Channel, at the south-eastern end of Lovell's Island. The entrance is between Thompson's Island and the Spectacles, whence it passes between the south-western end of Long Island and Moon Head; then, turning abruptly to the north-eastward, passes along the eastern shore of Long Island, between it and Rainsford Island, and thence towards George's Island into Inner Nantasket Roads. With care, this channel is safe even for strangers.

When abreast of the black buoy on Castle Rocks the entrance will bear SSE. A little to the westward of this bearing will be seen the precipitous face of Thompson's Island. It is surrounded by flats and shoals, which, on

its eastern side, extend off to a distance of three-quarters of a mile, with less than six feet at low water; but on its western side it is much bolder, and may be approached (if bound into Neponset River) within three hundred and fifty yards.

To the southward of Thompson's Island lies the peninsula of Squantum; and from the south-eastern end of the former a long and narrow sand-spit extends nearly S. by E. for five hundred yards, its southern end being within seventy-five yards of Squantum. Thus the island is nearly joined to the mainland, and there is no passage between them at low water.

On the eastern side of the entrance will be seen the Spectacle Islands, which will be nearly in range from this point of view. They are two islands of moderate height, bare of trees, and joined at low water by a dry bar. The northern island is sixty-five feet high, with cliff-like faces worn by the action of the water. On coming up with it there will be seen a group of buildings and a wharf on its southern end, where there is a low sand-point. The southern island, on approaching it, will be seen to be equally bare with the North Spectacle, but not so steep, although its height at the summit is the same. The northern face of this island is as precipitous as that of the North Spectacle, but this side is not visible from the Back Way. On the southern side the shore is low and sandy. Here there is a wharf making out to the edge of the channel from the western shore of the South Spectacle near its southern end.

When past the Spectacles on the SSE. course, Moon Island will appear on the western side of the channel, and Long Island on the eastern side. Moon Island cannot fail to be recognized by reason of its high, bare, precipitous head, called Moon Head, which forms its eastern end. Viewed from near the Spectacles it will look like an extension of the eastern face of Squantum.

Moon Island lies E. by N. and W. by S., and is three-quarters of a mile long. The Head, which is eighty-five feet high, forms the principal part of the island. The city sewerage reservoirs occupy its western slope; and the sewer embankment, extending about W. over one-third of a mile, joins it to the peninsula of Squantum, whose rugged hills appear to the westward of Moon Island.

Opposite to Moon Head appears, on the eastern side of the channel, the south-western extremity of Long Island, presenting a bare hill fifty feet high, with precipitous face. To the northward of this hill the surface slopes regularly almost to sea-level; rises again to a height of twenty or thirty feet; then falls again, and so continues, presenting a series of elevations and depressions, the hills varying from fifty to ninety feet in height. The highest land on the island is about midway between its northern and southern ends, where a smooth green hill rises to a height of ninety feet. On the northern slopes of this hill will be seen — on passing to the southward of Spectacle Islands — the City Almshouse; and here is a large wharf used as a steamboat-

landing. Still farther to the northward rises Long Island Head, eighty feet high, with the light-house on its summit. It will appear like a separate island, the land between it and the base of the hill, upon which the Almshouse is built, being so low as to be scarcely perceptible.

The channel passing between Moon Head and Long Island leads directly towards a bare precipitous head, with water-worn face, behind which rises a still higher hill, smooth and grassy, but not so steep. The high hill is Quincy Great Hill; the smaller head in range with it is Nut Island. The latter, sixty feet high, is two miles to the south-eastward of Moon Head, and lies on the eastern side of Quincy Bay.

To the southward and a little to the westward of Nut Island, and about three-quarters of a mile off, will appear a low, bare, rocky islet with one or two huts upon it. This is Hangman's Island, which lies in the middle of the entrance to Quincy Bay, about midway between Moon Island and Nut Island, and is surrounded by shoals. To the north-eastward of this island and in range with the western end of Peddock's Island will appear a large beacon of open-work, with a granite base, and surmounted by a staff and cage. This is on Sunken Island, and is one of the guides to the approaches to Weymouth Fore River. Neither this ledge nor Hangman's Island is in the way of vessels bound out by the Back Way.

When well past the south-western end of Long Island the channel turns abruptly to the north-eastward along the eastern face of that island, between it and Rainsford Island. This will appear as a low island, nearly bare of trees, but having several groups of buildings upon it, and a long wharf making off from its southern end. The buildings, which formerly belonged to the Quarantine Station, which was established upon this island, are now used for almshouse purposes, and are partially concealed by trees planted around them for ornament and shade. To the southward of the western end of the island a long ledge of bare rocks will be seen extending in a southerly direction a considerable distance. These are the Quarantine Rocks, and are among the principal obstructions to the entrance to Weymouth.

The course to the north-eastward leads directly towards the western end of Gallup's Island, which, from this point of view, will show as low, gently-sloping land, with the Quarantine buildings close to the shore, and a wharf making out to the southward and westward. Nix's Mate Beacon will appear a little to the northward of the course, and Long Island Light-house still farther to the westward.

When past the eastern end of Rainsford Island the channel turns to the eastward, the course leading directly for the southern angle of Fort Warren on George's Island, until within three-eighths of a mile of it, when it turns to the southward, leading directly towards a high bare hill, on the western slopes of which will be seen the village of Hull. This is Nantasket Hill. This course leads into Nantasket Roads, after which the directions for the Main Ship Channel must be followed.

OTHER PASSAGES IN BOSTON HARBOR.

There is a deep and unobstructed passage with not less than five fathoms leading between George's Island and Gallup's Island. Vessels passing up the Narrows on the flood-tide may, if the wind be light, be set through this passage. In such a case they will find good anchorage anywhere to the southward of Gallup's Island, or to the westward of George's Island. If such a vessel be of light draught, she may avail herself of a channel with ten feet at mean low water which leads to the northward, between Nix's Mate and Long Island Head, into the Main Ship Channel.

A channel, called Sculpin Ledge Channel, leads from President's Roads into the Back or Western Way, and is commonly used by vessels bound to Quincy and Weymouth. It is good for eleven feet at mean low water. The channel lies nearest to Long Island, extensive shoals making off from the eastern shore of the Spectacles.

BLACK ROCK CHANNEL.

This is a narrow channel which leads from the Main Ship Channel in a NE. direction, between Lovell's Island and Narrows Light-house, into Hypocrite Channel. It is dangerous, and is never used by large vessels unless there is ice in the Narrows. The south-eastern side of this passage is marked by Spit Bar; the north-western side by the shoals on the eastern side of Lovell's Island. Strangers must not attempt it.

SHIRLEY GUT.

This narrow and intricate passage is only fit for steamers, and must never be attempted by strangers, under any circumstances. Thirteen feet at mean low water may be taken through it under the guidance of a pilot; but the channel is crooked and dangerous, with a swift current. It leads between Point Shirley and Deer Island, and is about one hundred and fifty yards wide.

DORCHESTER BAY.

This large shallow bay lies between South Boston on the north; the shores of Dorchester, including Old Harbor Point and Savin Hill, on the west; Commercial Point and Squantum Meadows on the south, and Squantum Head and Thompson's Island on the east. A channel, carrying about two fathoms at mean low water in its most shallow part, enters the bay near Thompson's Island, and runs in a south-westerly direction to the Cow Pasture Flats, which make off from the southerly side of Old Harbor Point. From the point of these flats it runs to the westward until past Farm Point Bar, where it turns to the southward and enters Neponset River.

From Dorchester Point, the eastern point of the peninsula of South Boston, the shore of the bay runs to the westward a mile and a quarter, then turns to the southward for nearly half a mile, and then to the eastward into a long marshy point, called Old Harbor Point, thus forming a large but shallow cove, dry at low water, and called Old Harbor. A small cove, also dry at low water, makes in on the southern side of Old Harbor Point, between it and a steep, partially-wooded hill, one hundred feet high, and called Savin Hill. The shore extends to the eastward from the base of this hill into a long narrow sand-point, called Savin Point or Fox Point. (The City Sewerage Pumping Station and Bay State Gas Works are on Old Harbor Point.)

On the southern side of Savin Hill another large cove makes in, the shores of which are thickly settled. It is dry at low water, and is crossed near its head by a bridge, over which passes the Old Colony Railroad. The southern point of the entrance to this cove is a flat peninsula, called Commercial Point, composed of low land, upon which are located the extensive works of the Boston Gas-Light Company. This peninsula forms the western point of entrance to

NEPONSET RIVER.

This is the first river emptying into Boston Harbor to the eastward of South Boston. It leads to Neponset Village, one mile above its mouth, and thence to Milton Mills, two miles farther by the river. It is narrow and crooked, the approaches are dangerous, and it is not considered safe for strangers to enter without a pilot.

The river is a third of a mile wide at its mouth, but grows gradually narrower until, at Milton Mills, it is only one hundred yards in width. The western side of the entrance is thickly settled, and is marked by the Gas Company's wharf, which extends out to the edge of the channel. The eastern shores of the river are composed almost entirely of salt-meadow, and are destitute of houses.

In entering this river vessels pass between the Spectacles and Castle Island, keeping along the western shore of Thompson's Island and steering nearly for Commercial Point. When past Thompson's Island the thickly-settled country between Mount Bowdoin and Neponset will be seen ahead; and, on the western side of the channel, Savin Hill will appear as a high, steep hill, partly wooded, and with a number of handsome houses dotting its slopes. It will be noticeable as the only high land on the shore between Dorchester Point and Squantum. To the southward of the hill, however, and well back from the shore, will appear the summit of Mount Bowdoin,—one hundred and seventy feet high. Its sides are cultivated, and its whole surface is dotted with houses and orchards.

Next to the southward will appear Commercial Point, marking the western

side of the mouth of the river; and to the eastward of it a low, broad, marshy point will be seen, with the mouth of the river between them. This point, called Farm Point, is the eastern point of entrance to Neponset River, and the extensive marshes, of which it is the extremity, are called Squantum Meadows. There are several patches of firm ground on the peninsula (which are occupied by a hotel and summer cottages), and two or three small groves of trees. To the eastward of it, and just to the southward of Thompson's Island, the high land of Squantum will appear, grassy, with groups of trees, and under cultivation. Squantum separates Dorchester Bay from Quincy Bay,—the large, shallow bay which makes in between Squantum and Hough's Neck.

On entering Neponset River between Commercial Point and Farm Point the course of the stream is at first S. by E. for nearly a mile,—between low, marshy banks, with occasional groves of trees,—until abreast of Neponset, which is seen about a quarter of a mile back from the western shore. Thence the stream makes a turn about SW. by W. for a quarter of a mile, passing under the Old Colony Railroad bridge and the county bridge just to the southward of it. Thence it runs S. by W. (still between marshy banks) for one-third of a mile, thence SW. by W. for a quarter of a mile, and continues its windings, with an average width of a little over a hundred yards, to Milton Mills Village. This village is two miles and a quarter above the mouth of the river in a straight line, but nearly three miles and a half by the windings of the river. The land upon which the village stands is high, slopes gently to the water, and is under cultivation.

About a mile above the county bridge a third bridge carries the road to West Quincy, across the river. All these are, of course, draw-bridges.

QUINCY BAY.

This large but shallow bay indents the southern shore of Boston Harbor just to the eastward of Neponset River. On the west it is separated from that river by the peninsula of Squantum; on the east, Hough's Neck separates it from Weymouth Fore River. Between these two points the bay is two miles and one-third wide and about a mile long. Its shores are mostly low and gently sloping towards the water, cleared and under fine cultivation; but high steep hills will appear behind and over the low lands. Of these, the highest summits are those of Forbes' Hill and Mt. Wollaston.

The village of Quincy is situated about a mile inland from the shores of this bay, near its eastern end. It has no communication by water with the bay, but there is a narrow frontage on a small stream emptying into Town River Bay.

The peninsula of Squantum, which forms the western boundary of Quincy Bay, is of irregular shape, lies ENE. and WSW., is a mile long, and has an

average width of two-thirds of a mile. Its surface is hilly, with some trees on the lower slopes, and the highest land is about one hundred and twenty-five feet above sea-level. At its western end, where it joins the mainland, it is composed almost entirely of salt-meadow, forming part of the Great Meadows which extend to Neponset river. The whole of the high land of Squantum is under cultivation, or occupied by summer residences. Its northern point is a steep hill, one hundred feet high, with a few houses at its base.

To the eastward of Squantum lies Moon Island, easily recognizable by the precipitous head on its eastern end. It is entirely bare of trees, and is now joined to Squantum by a causeway.

Hough's Neck forms the eastern boundary of Quincy Bay and separates it from Weymouth Fore River. It is of irregular shape, lies about E. by N. and W. by S., is about a mile long, of moderate height, the surface being smooth and gently sloping, and bare of trees except orchards. At its northeastern end it terminates in a smooth green hill, one hundred feet high, with precipitous faces, called Quincy Great Hill. Two hundred yards to the northward of it, but connected with it at low water, lies Nut Island, a small bare islet, sixty feet high, with a precipitous face on its northern side, the cliff descending abruptly from the summit of the island to the water. The channel from the westward into Weymouth passes between this island and Peddock's Island.

Half-Moon Island lies nearly half a mile from the southern shore of Quincy Bay, off the mouth of Black's Creek. It is a crescent-shaped sandy shoal or bank, from seven to ten feet out at low water, and covered at high water, but has the appearance of an island, when uncovered, by reason of the surrounding flats being much lower. It is of no importance.

Hangman's Island is a small, bare, rocky islet, lying off the mouth of Quincy Bay, midway between Moon Island and Nut Island, is surrounded by shoals, and must not be closely approached. It is one of the dangers in the approach to Weymouth from the westward.

WEYMOUTH FORE RIVER.

This river empties into Boston Harbor to the eastward of Hough's Neck, Quincy Great Hill forming the western point of entrance and Grape Island the eastern. That portion of the Harbor into which this river empties is usually called Hingham Bay, and its boundaries are: on the east, Nantasket Beach; on the north, Point Allerton and the shore from thence to Windmill Point; on the west, Peddock's Island and Hough's Neck.

Weymouth Fore River is quite wide at its mouth, but quickly diminishes, until at the bridge it is only an eighth of a mile in width. It has not less than three fathoms water as far as the bridge, and even for some distance

above it; but the channel is narrow and somewhat crooked, and it is not safe for strangers to enter it.

Grape Island lies E. and W., is about half a mile long, and has a somewhat saddle-shaped appearance when viewed from the northward, the land in the centre being the lowest. Passing it, there opens a narrow passage, nearly dry at low water, which leads to the eastward towards Hingham Harbor. The southern side of this passage is formed by a long, low and narrow point, called Lower Neck, entirely bare of trees, as is also Upper Neck, just to the southward of it. The former separates Weymouth Fore River from Weymouth Back River, which empties into Hingham Bay just to the eastward of Fore River.

The entrance to Weymouth Fore River from the eastward is through Hull Gut, — the narrow but deep passage which leads into Hingham Bay between Windmill Point and Peddock's Island.

Windmill Point is the low sandy point which makes out to the westward from the foot of Nantasket Hills. It is occupied by Hotel Pemberton, and is the terminus of the Nantasket Beach Railroad.

On the western side of Hull Gut will appear the high round head, with precipitous faces, which forms the northern end of Peddock's Island. This head is over one hundred feet high, and covered only with grass. Passing to the southward, it will be seen to be connected with the rest of the island by a narrow strip of low land about three hundred yards long. The whole of the island is bare of trees and the surface undulating. The length is a mile and a quarter, and the shape very irregular. On its southwestern side, between it and Nut Island, leads the western passage into Weymouth.

A small bare islet, lying about two hundred yards off the southern shore of Peddock's Island, and connected with it at low water, is called Pen or Prince's Head.

Bound into this river through Hull Gut, when abreast of Prince's Head, you will pass to the westward of a small, low, bare islet, called Sheep Island. It lies a little over half a mile to the south-eastward of Prince's Head, and about the same distance to the northward of Grape island; is surrounded by shoals, and must not be closely approached. When past it, the channel leads to the southward and well to the eastward of a square granite beacon, surmounted by a staff and cage. This is on Pig Rocks, which lie a little over half a mile to the westward of Quincy Great Hill.

After passing between Grape Island and Quincy Great Hill there will be seen to the westward, well in with the shore of Hough's Neck, a bare islet, called Raccoon Island, connected with the Neck at low water. A little to the southward the southern point of Hough's Neck runs into a long point or head, called Rock Island Head, sixty feet high, smooth and grassy. On its southern side the shore makes in to the westward, forming a large cove,

dry at low water, called Rock Island Cove, whose shores are mainly composed of meadow

On the eastern shore of the river the first prominent point lies nearly opposite to Rock Island Head, is called Eastern Neck, and is the first point above Upper Neck. It is a long peninsula, lying E. and W. between Fore and Back Rivers, is undulating, bare of trees, and about sixty feet high near its western end. Here the shore turns to the southward, and then to the westward, forming a shallow cove, which skirts the base of a smooth green hill, with somewhat precipitous face, called Weymouth Great Hill, a hundred and forty-five feet high. Hence to the bridge the eastern shores are of moderate height, cleared and cultivated. The settlement of Old Spain (North Weymouth) will be visible about half a mile back from the shore. All of this part of the shore presents a steep, but not high face towards the river.

On the western side of the river, after passing Gull Point (the southern point of the entrance to Rock Island Cove) will be seen the village of Germantown, — a small hamlet, situated on the northern side of the entrance to Town River Bay which leads up to Quincy. Germantown is situated among smooth, low, cleared lands, and has several wharves both on Fore River and on Town River Bay.

On the southern side of the entrance to Town River Bay is Bent Point (Quincy Point), a long, low, thickly-settled point, with wharves and docks on its eastern face. Quincy Point Village occupies the shores on the southern side of the entrance to Town River Bay, as Germantown does the northern side. The county bridge crosses at this village, — the river being here about an eighth of a mile wide, but after passing under the bridge it soon widens out into a large bay.

The point on the eastern side of Fore River where the bridge crosses is wooded, and is remarkable as being the first wooded point met with on this side of the river. Here the eastern shores spread away to the south-eastward and terminate in a shallow cove, whence a small streamlet or brook leads to North Weymouth. There is no passage, however, even for boats.

On the western shore, just to the southward of the bridge, opens Ruggles' Creek, — a shallow stream running to the westward between Bent Point and a cleared and settled peninsula of moderate height called Braintree Neck. On the southern side of this peninsula makes in Hayward's Creek, — another shallow stream which leads up to Newcomb's Landing. Above this creek the shore runs about ESE. for half a mile, and then turns to the southward toward Weymouth Landing, the river being here contracted to the width of a small creek with a very shoal and crooked channel. The shores are almost all cleared, settled, and highly cultivated, with occasional groves of trees.

Town River Bay makes in on the north-western shore of Fore River, as before mentioned, between the villages of Germantown and Bent Point. It

is very shoal, and not safe for strangers to enter at any time, being only about one hundred and seventy-five yards wide at its entrance; but it rapidly widens after passing Bent Point to nearly three-eighths of a mile. The northern shores are mostly marshy; the southern shores are cleared and settled, with somewhat steep faces.

On the western side of the peninsula upon which Germantown is built there makes in a large but shallow cove, called Sailor's Snug Harbor. It is dry at low water. The name does not indicate any advantages as a harbor, but is derived from the institution of that name for superannuated ship-masters, which is built upon its banks. The eastern point of the entrance to this cove is called Phillips' Head.

Town River empties into the bay nearly a mile above Bent Point. It is nothing but a small creek, very crooked, and extremely shoal. The sloops which go to Quincy can only sail to the mouth of the canal.

WEYMOUTH BACK RIVER.

This river empties into Hingham Bay just to the eastward of Fore River, from which it is separated by Lower and Eastern Necks. It is narrow, crooked, and shallow, and is of little commercial importance. Directly across its mouth lie Grape and Slate Islands, which are connected at low water, and completely shut off the entrance from the northward, leaving a very narrow, crooked, and shallow passage on each side of these islands. That on the eastern side has but five feet at mean low water, and the western channel (which leads between Grape Island and the Lower Neck) has three fathoms, but is so extremely narrow as to render it impossible for anything but a steamer to keep in the best water. Six feet at mean low water is all that can be taken up to the bridge.

At its mouth Weymouth Back River is nearly seven hundred yards wide, but most of this width is occupied by the large flats, dry at low water, which make off from the eastern side of the entrance, extending to the northward nearly to Grape Island, and to the westward within two hundred and fifty yards of Lower Neck.

From its mouth the river runs first about S. $\frac{1}{2}$ W. half a mile, then turns abruptly, and runs W. for five-eighths of a mile to a headland on the southern bank, called Stodder's Neck, which is of moderate height, but has steeply-sloping faces on its northern and western sides. Its summit is bare of trees, but there is a thin growth on its western and southern slopes. A small narrow cove makes in on its eastern side, called Stodder's Cove. At Stodder's Neck the river widens out considerably and takes an abrupt turn S., which course it continues with slight variation to its head. A quarter of a mile above the Neck it is crossed by a bridge, and beyond this it is very narrow between its banks, and so continues for about one-quarter of a mile, forming

what is called The Narrows. Above this point it becomes a wide and shallow bay, and so continues to the southward for three-quarters of a mile, beyond which it is a mere creek.

Grape Island, which lies in an E. and W. direction across the mouth of Back River, is about half a mile long, and presents, when viewed from the northward, a somewhat saddle-shaped appearance, the land in the middle being the lowest. It is entirely bare of trees, of moderate height, with a somewhat steep face on its northern and western sides, and is surrounded by shoals. On the east it is connected by a flat, bare at low water, with Slate Island, a small, low, thinly-wooded island, an eighth of a mile to the eastward, and about five hundred yards to the northward of the entrance to Back River. These two islands shut off any direct approach to the river, leaving only the narrow and crooked channels mentioned above.

No stranger should attempt to enter this river, under any circumstances, as none of the shoals and ledges are buoyed, and no sailing directions can be given for the channel.

HINGHAM HARBOR.

This harbor is formed by a large but shallow cove, which makes into the mainland in the south-eastern corner of Hingham Bay. It is a mile long and seven-eighths of a mile wide at its widest part, but at low water is a dry flat with the exception of a narrow and crooked sluie which runs along the eastern shore. The village of Hingham occupies the southern and part of the eastern shores of this harbor. The principal entrance to this harbor is through Hull Gut. When past the Gut the course leads to the south-eastward, between two small bare islands nearly a mile apart. That to the eastward, which is also much the larger of the two, is called Bumkin Island. It is about fifty feet high, smooth, and entirely bare of trees; lies in an ESE. and WNW. direction, and is three-eighths of a mile long. Its western end is somewhat bold-to, and may be closely approached; but on the east it is connected with Nantasket Beach by an extensive flat, dry at extreme low tides.

The small island on the western side of the passage is Sheep Island. It is low, bare, about one-eighth of a mile long, and surrounded by shoal water. From Bumkin Island it bears W. by N., three-quarters of a mile distant.

The channel into Hingham leads close along the western shore of Bumkin Island, and here opens to the eastward a narrow channel leading into Weir River. On the southern side of the entrance to this river will be seen a bare grassy head, called World's End, about eighty feet high, with a steep face on its western side. On its southern side it is joined by a very narrow strip of low land, about one hundred yards long, to another high, smooth, grassy hill with a precipitous face on its western side. This is called Planter's Hill, and forms the eastern point of the entrance to Hingham Harbor. It is one hundred feet high, and its southern slopes are under cultivation.

The western point of the entrance to Hingham Harbor is called Crow Point. When past Bumkin Island this point will appear as a high bare hill, with a steep face to the northward, sixty-five feet high, and bare of trees. A pier or landing is built out from its eastern end to the edge of the channel. Three-eighths of a mile to the southward of this point a long narrow cove, called Walton's Cove, makes into the western shore. On the southern side of the entrance to this cove is a large, high, smooth hill with a somewhat steep face on its northern side, called Otis' Hill. This hill separates Walton's Cove from a long narrow cove, called Broad Cove, which makes in on the southern side of the hill.

On the eastern side of Hingham Harbor the only indentation of any size makes in on the southern side of Planter's Hill, and is called Martin's Well. All of these coves are dry at low water.

In coming into this harbor several small islands will be noticed lying apparently in the middle of the passage. The most northerly of these is called Chandler's Island, and is nearly two hundred yards square, low, bare and rocky. From Crow Point it bears SE. by E. $\frac{1}{2}$ E., one quarter of a mile distant. It lies on the eastern side of the channel, which here takes an abrupt turn to the eastward, passing to the northward of two small rocky islets, the westernmost of which, called Ragged Island, lies about three hundred and fifty yards SW. from Chandler's Island, and one-quarter of a mile E. of the entrance to Walton's Cove. It is low, bare and rocky, three hundred yards long, and there is no passage to the westward of it except at high water. About one hundred and fifty yards E. of this island lies Sailor's Island, also rocky and bare, lying E. and W., and distant about two hundred yards in a SSE. direction from Chandler's Island. It marks the second turning point in the channel, which here runs to the southward past the eastern end of this island. The island itself is about two hundred and eighty yards long.

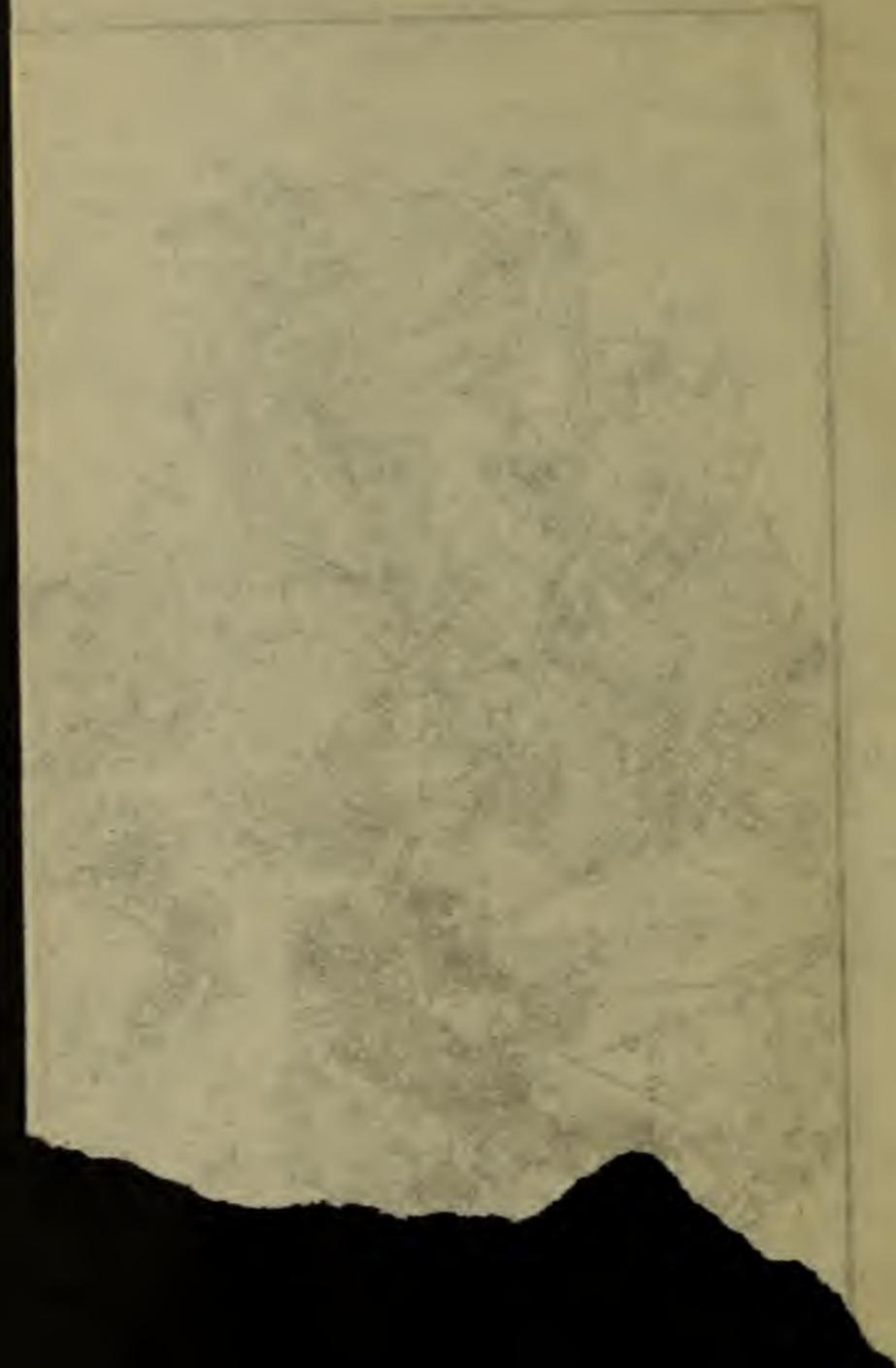
The channel continues to the southward from Sailor's Island for three hundred and fifty yards, then runs to the eastward until within about one hundred and fifty yards of the eastern shore, near the wharf. Here it turns to the southward, and skirts the eastern shore at about the same distance, to the head of the harbor.

In the middle of the flats, about a quarter of a mile to the northward of the head of the harbor and one-third of a mile to the southward of Sailor's Island, lies a very small bare islet, called Button Island. It is only about fifty yards in diameter.

THE GANGWAY.

This is a narrow channel which leads along the eastern shore of Boston Bay from Scituate to the northward, threading the intricate passages among the Cohasset Rocks. Although there is good water through its entire length it is used only by vessels of light draught, and by them only when piloted by





an experienced pilot. No stranger should ever attempt this passage even by day; it would be impossible by night.

From Scituate to Cohasset Entrance the shore is guarded by many bare and sunken ledges lying at various distances from the land, dangerous in the extreme, and many of them not buoyed. To thread the channels between these requires an experienced pilot, and, since Scituate light has been extinguished, few of these dare attempt the passage at night.

COHASSET HARBOR.

This harbor is situated at the south-eastern end of Boston Bay, and is formed by a large but shallow cove, of irregular shape, which makes into the shore on the western side of Strawberry Point. The entrance lies five miles and a quarter SE. from Point Allerton. The eastern and southern shores are composed almost entirely of salt-meadow, while the western shores show innumerable sand-hillocks interspersed with marshy land.

This harbor cannot be entered by strangers, for it is so surrounded by bare and sunken ledges as to need all the skill of those well acquainted with the locality to enable them to pass safely through. There are three channels commonly used,— one, the Western or Brush Island Channel, which enters between Brush Island ledge and Chittenden Rock; the second, leading between West Hogshead Rock and the Grampuses, called the Middle Channel; and the third, called the Eastern Channel, which leads between East Shag Rock and the West Willies.

On approaching this harbor the most conspicuous object is Minot's Ledge Light-house, built on the Outer Minot,— the most northerly of the Cohasset Rocks. It is a dark-gray granite tower, which shows a fixed white light, of the second order, from a height of ninety-two feet above the sea, visible sixteen miles. At low water the Outer Minot is bare, as are also many of the rocks inshore of it between the light-house and Strawberry Point. Strawberry Point, which marks the eastern boundary of Boston Bay, is a low cleared point with groups of houses scattered here and there over its surface. It is a summer resort of some note, the well-known Glades House being situated upon it. Masses of bare and sunken ledges, with a few bare islets, surround this point, and render a close approach to it very hazardous.

CITY OF BOSTON.



FOURTEENTH ANNUAL REPORT

OF THE

BOARD OF COMMISSIONERS OF THE DEPARTMENT OF PARKS

FOR THE CITY OF BOSTON,

FOR THE YEAR 1888.



To the Honorable the City Council of the City of Boston: —

Section 15 of the Act of 1875, Chapter 185, entitled "An Act for the laying out of Public Parks in or near the City of Boston," requires that the Board of Park Commissioners "shall annually, in the month of January, make to the City Council of Boston a full report of its doings for the preceding year, including a detailed statement of all their receipts and expenditures."

In accordance therewith, the Board has the honor to submit the following report: —

FINANCIAL STATEMENTS.

I.

Receipts and Expenditures of the Department for the Year 1888.

THE PARKWAY.

LAND ACCOUNT.

MUDGY RIVER.

Balance unexpended, Dec. 31, 1887	.	.	.	.	\$69,130 08
<i>Expenditures.</i>					
Amount paid for land in 1888	.	.	.	.	\$3,742 80
Balance unexpended, Dec. 31, 1888	.	.	.	.	65,387 28
					\$69,130 08

CONSTRUCTION AND MAINTENANCE.

Amount transferred from loan for Public Park	
Construction	\$177,348 69
Amount transferred from Appropriation for Maintenance	
.	4,366 04

\$181,714 73

EXPENDITURES FOR CONSTRUCTION.*Sidewalks, Gutters, and Drainage.*

Roadways: labor, and materials	\$46,834 87
Curbs and walks: labor, and materials	14,587 80
Gutters: labor, and materials,	10,000 46
Drainage: labor, and materials	4,788 41

\$76,211 54

Excavating, Grading, Loam, and General Work.

Grading: labor, and materials	\$21,945 54
Dredging: labor, and materials	12,353 59
Superintendence and general work	7,299 79
Loam: labor, and materials	7,236 06
Engineering expenses	2,371 62
Fence: labor, and materials	82 80

51,289 40

Filling.

Amount paid B. & A. R.R. under contract for filling	\$27,214 65
Advertising	176 55

27,391 20

Plantations.

Labor and expenses	10,531 39
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Agassiz Bridge.

Expenses of construction, labor, and materials	8,997 83
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Plans and Designs.

F. L. & J. C. Olmsted, Landscape Architects, and expenses	1,632 00
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Machinery, Tools, and Implements.

Road-rollers, water-cart, etc.	1,295 33
	\$177,348 69

EXPENDITURES FOR MAINTENANCE.*Care of Grounds and Buildings.*

Watchmen, labor, and expenses	\$2,359 49
Repairs, and care of buildings, Muddy River	299 56

Amounts carried forward, \$2,659 05	\$177,348 69
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<i>Amounts brought forward,</i>	\$2,659 05	\$177,348 69
Signs and notices	91 02	
Repairing Beacon Entrance		
Bridge	57 08	
	—————	\$2,807 15

Park Police.

Pay of Park Keepers	\$1,469 05	
Police Equipments and Supplies	89 84	
	—————	1,558 89
	—————	4,366 04
	—————	<u>\$181,714 73</u>

ARNOLD ARBORETUM.

CONSTRUCTION AND MAINTENANCE.

Amounted transferred from Appropriation for maintenance		\$3,147 62
Amount transferred from loan for Public Park Construction		547 47
	—————	<u>3,695 09</u>

EXPENDITURES FOR CONSTRUCTION.

Driveways.

Expenses of construction, labor, etc.	\$99 14	
Fuel, supplies, carting, etc.	1 38	
Materials of construction	14 25	
	—————	\$114 77

Plantations.

Labor	432 70	
	—————	\$547 47

EXPENDITURES FOR MAINTENANCE.

Park Police.

Pay of Park Keepers	\$1,568 02	
Police equipments and supplies	2 41	
	—————	\$1,570 43

Care of Grounds and Buildings.

Watchmen, labor, and expenses	\$1,544 19	
Signs and notices	33 00	
	—————	1,577 19
	—————	3,147 62
	—————	<u>\$3,695 09</u>

FRANKLIN PARK.

LAND ACCOUNT.

Amount transferred from loan for Public Park Lands		\$9,028 57
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Expenditures.

Amount paid for land in 1888		\$9,028 57
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CONSTRUCTION AND MAINTENANCE.

Amount transferred from loan for Public Park Construction	\$244,887 22
Amount transferred from Appropriation for maintenance	8,835 51
	————— \$253,722 73

EXPENDITURES FOR CONSTRUCTION.

Driveways.

Surfacing roads . . .	\$79,200	06
Grading roads . . .	50,617	07
Paving blocks . . .	6,130	22
Paving	1,514	20
Curbstones . . .	644	60

		\$138,106
		15

Clearing and Grading Grounds, Drainage, and General Work.

Grading grounds . . .	\$25,318	53
Drainage	11,812	43
Superintendence and general work	7,674	99
Engineer's assistants and expenses	5,554	99
Clearing grounds	3,141	77
		—
		53,502
		71

Structures.

The Shelter — excavating, stone-work, etc. . . .	\$13,057 03
Amount paid Creesy & Noyes under contract . . .	13,000 00
Flag-staff and fittings, guys, serving, etc.	1,019 67
Advertising, printing, and drafting	350 33
	— 27,427 03

Park Wall and Gateways.

Materials, labor, and expenses 5,826 99

Overlook.

Materials, labor, and expenses 5,237 91

Ellicott Arch.

Materials, labor, and expenses 4,342 68

Plantations.

Labor and expenses 3,227 60

Playstead Green.

Labor and materials 2,657 01

Machinery, Tools, and Implements.

Steam drill, road-rollers, water-cart,
and mower 1,930 61

Amount carried forward, \$242,258 69

PARK COMMISSIONERS' REPORT.

5

Amount brought forward, \$242,258 69

Water Supply.

Water-pipes and labor 1,801 28

Plans and Designs.

Landscape architects and expenses	827 25
	\$244,887 22

EXPENDITURES FOR MAINTENANCE.

Park Police.

Pay of Park Keepers	\$4,082 37
Pay of sub-keepers	1,913 60
Equipments and supplies	752 25
	\$6,748 22

Care of Grounds and Buildings.

Expenses	\$1,536 52
Labor	481 02
Signs and notices	69 75
	2,087 29
	8,835 51
	\$253,722 73

CHARLES RIVER EMBANKMENT.

CONSTRUCTION AND MAINTENANCE.

Amount transferred from loan for Public Park Construction	\$37,415 95
Amount transferred from Appropriation for maintenance	1,972 82
	\$39,388 77

EXPENDITURES FOR CONSTRUCTION.

Filling, Grading, Loam, and General Work.

Grading, labor	\$11,626 25
Loam	10,863 49
Filling and rip-rap under West Boston bridge	2,461 47
Engineering expenses	684 43
General work	631 28
	\$26,266 92

Walks and Drainage.

Gravel	\$2,847 70
Drainage	2,208 50
Labor on walks	44 27
	5,100 47

Iron Railing and Fence.

Railing on sea-wall	\$4,112 71
Fence around Gymnasium ground — advertising	46 25
	4,158 96

Plantations.

Labor	1,021 85
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<i>Amount carried forward,</i>	\$36,548 20
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Amount brought forward, \$36,548 20

Plans and Designs.

Landscape architects and expenses 825 75

Machinery, Tools, Etc.

Rollers	42 00
	<u> </u>
	\$37,415 95

EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Labor and expenses	\$65 05
Repairs on sea-wall	54 83
Signs and notices	43 38
	<u> </u>
	163 26

Park Police.

Pay of Park Keepers	1,809 56
	<u> </u>
	1,972 82
	<u> </u>
	\$39,388 77

MARINE PARK.

CONSTRUCTION AND MAINTENANCE.

Amount transferred from Appropriation for main- tenance	\$3,568 11
Amount transferred from loan for Public Park Con- struction	121,060 34
	<u> </u>
	\$124,628 45
	<u> </u>

EXPENDITURES FOR CONSTRUCTION.

Structures.

Amount paid under con- tract with Builders'	
Iron Foundry for iron pier	\$112,184 93
Inspection and engineer- ing expenses	1,902 74
Temporary pier, connec- tion with iron pier . .	995 00
Advertising contracts for iron pier and railing . .	160 60
	<u> </u>
	\$115,243 27

Filling, Grading, and General Work.

Filling material	\$1,141 83
Superintendence and general work	358 06
	<u> </u>
	1,499 89

Curbing.

Amount paid under con- tract for curb	\$3,823 42
Labor in setting curb	393 02
Advertising	100 74
	<u> </u>
	4,317 18
	<u> </u>
	121,060 34

Amount carried forward, \$121,060 34

PARK COMMISSIONERS' REPORT.

7

Amount brought forward,	\$121,060 34
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EXPENDITURES FOR MAINTENANCE.

Care of Grounds and Buildings.

Watchmen and labor on grounds	\$2,321 40
Expenses	705 96
Signs and notices	10 59
	\$3,037 86
	<i>Park Police.</i>
Pay of Park Keepers	530 25
	3,568 11
	\$124,628 45

WOOD ISLAND PARK.

CONSTRUCTION AND MAINTENANCE.

Amount transferred from loan for Public Park Construction . . .	\$2,779 79
---	------------

EXPENDITURES FOR CONSTRUCTION.

Neptune Bridge.

Superstructure	\$2,091 70
Iron railing	257 94
Printing and advertising	86 94
Engineering expenses	3 66
	\$2,440 24

Grading and General Work.

Grading : labor, and materials	\$333 55
Superintendence and general work	6 00
	339 55
	\$2,779 79

DEPARTMENT APPROPRIATION.

Balance unexpended Dec. 31, 1887	\$2,258 42
Appropriation for the financial year 1888-89	6,500 00
Amount transferred from Income Account	345 36
	\$9,103 78

GENERAL ACCOUNT.

Expenditures.

Salary of secretary and clerk	\$3,000 00
Clerical service at office	1,800 00
Printing annual report, etc. . . .	1,495 37
Telephone and messenger service and incidental expenses	642 13
Coach-hire for Committee of Legislature and others	129 00
Stationery	94 17
Surveying Muddy River lands	89 10
	\$7,249 77
Balance unexpended Dec. 31, 1888	1,854 01
	\$9,103 78

PARK NURSERY.

Balance unexpended Dec. 31, 1887	\$1,285 26
Appropriation for the financial year 1888-89	5,000 00
Amount transferred from Income Account	681 64
	\$6,966 90

Expenditures.

Labor	\$5,068	75
Plants	687	67
Expenses in care of propagating house and nursery,	181	74
Balance unexpended Dec. 31, 1888	1,028	74
		—
		\$6,966 90

APPROPRIATION FOR MAINTENANCE.

Balance unexpended, Dec. 31, 1887	\$4,472	18
Appropriation for the financial year 1888-89	20,000	00
		—
		\$24,472 18

Expenditures.

Paid on account of Franklin Park	\$8,835	51
Paid on account of Parkway	4,366	04
Paid on account of Marine Park	3,568	11
Paid on account of Arnold Arboretum	3,147	62
Paid on account of Charles River Embankment	1,972	82
Balance merging end of financial year	34	56
Balance unexpended Dec. 31, 1888	2,547	52
		—
		\$24,472 18

INCOME.

Receipts.

Balance remaining, Dec. 31, 1887	\$4,153	61
Received from premium on loan	20,385	00
Received from rents and sale of buildings, grass, and wood	3,950	06
		—
		\$28,488 67

Payments.

Premium on loan held by City Treasurer	\$20,385	00
Transferred to Park Nursery	681	64
Transferred to Park Department	345	36
Balance remaining Dec. 31, 1888	7,076	67
		—
		\$28,488 67

PUBLIC PARK LANDS.

Balance unexpended Dec. 31, 1887		\$56,687 83
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Expenditures.

Paid on account of Franklin Park	\$9,028	57
Balance unexpended Dec. 31, 1888	47,659	26
		—
		\$56,687 83

PUBLIC PARK CONSTRUCTION.

Balance unexpended Dec. 31, 1887	\$85,896	59
Public Park Construction Loan, issued in 1888	500,000	00
		—
		\$585,896 59

Expenditures.

Paid on account of Franklin Park	\$244,887	22
Paid on account of Parkway	177,348	69
Paid on account of Marine Park	121,060	34
Paid on account of Charles River Embankment	37,415	95
Paid on account of Wood Island Park	2,779	79
Paid on account of Arnold Arboretum	547	47
Balance unexpended Dec. 31, 1888	1,857	13
		—
		\$585,896 59

II.

Summary of Receipts and Expenditures on account of Park-way Construction from July 23, 1877, to Dec. 31, 1888.

PARKWAY CONSTRUCTION.

BACK BAY FENS.

Receipts.

From appropriations for Back Bay	\$1,082,179 39
From loan for Public Park Construction	341,490 94
From appropriations for Park Department	22,868 85
From Income Account	3,449 41
	—————\$1,449,988 59

Expenditures.

Filling	\$480,968 43
Excavating, grading, loam, and general work	365,836 02
Sidewalks, gutters, and drainage	163,311 60
Retaining walls, curb, and fence	107,284 71
Boylston bridge	92,011 43
Beacon entrance bridge	56,675 79
Agassiz bridge	48,393 95
Railroad bridge	39,995 04
Plantations	39,557 62
Plans and designs	22,607 31
Office and general expenses	14,114 92
Machinery, tools, etc.	13,759 61
Surveying	5,472 16
	—————\$1,449,988 59

MUDDY RIVER.

Receipts.

From appropriations for Muddy-River Improvement	\$4,000 00
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Expenditures.

Surveys, plans, and designs	\$4,000 00
---------------------------------------	------------

III.

Receipts and Disbursements of the Department from the Organization of the Board, Oct. 8, 1875, to Dec. 31, 1888.

PUBLIC PARK CONSTRUCTION AND MAINTENANCE.

Receipts.

Public Park Loan for lands, less balances merged	\$2,883,791 73
Appropriations, less transfers, merged balances, and betterment expenses	1,571,111 49
Public Park Construction Loan	1,000,000 00
Income appropriated to maintenance	55,934 69
	—————\$5,510,837 91

Disbursements.

Parkway construction	\$1,453,988 59
Franklin Park land	1,423,866 99
Parkway land	629,086 47
Franklin Park construction	430,155 63
Charles River Embankment land	370,886 45
Marine Park land	232,972 57
Charles River Embankment construction	227,584 62
Marine Park construction	182,948 74
Arnold Arboretum construction	94,199 61
Arnold Arboretum land	79,932 71
Wood Island Park construction	66,470 40
Wood Island Park land	50,000 00
General account	45,900 36
Franklin Park maintenance	36,909 56
Park Nursery	22,920 14
Arnold Arboretum maintenance	9,742 79
Marine Park maintenance	9,172 93
Charles River Embankment maintenance	8,360 47
Parkway maintenance	8,278 94
Wood Island Park maintenance	49 33
Balance unexpended Dec. 31, 1888	127,410 61
	<hr/>
	\$5,510,837 91

PUBLIC PARK DEBT AND SINKING FUND.

Receipts.

Appropriations for interest on debt	\$623,554 47
Appropriations for Sinking Fund	360,987 00
Received from betterments, less refunded	310,130 75
Interest on bank deposits and investments	136,702 41
Income applied to the payment of debt	94,000 00
Income paid into Sinking Fund	60,958 61
From Park appropriations for Betterment expenses	9,677 62
Unexpended balances of loans for Park lands paid into Sinking Fund	180 84
	<hr/>
	\$1,596,191 70

Disbursements.

Interest on Public Park debt	\$623,554 47
Debt paid by Sinking Fund	450,000 00
Public Park Sinking Fund	404,914 99
Debt cancelled by revenue and betterments	99,000 00
Betterment expenses	9,677 62
Betterments held under protest	9,044 71
	<hr/>
	\$1,596,191 70

DEBT STATEMENT.

The Public Park Debt, Dec. 31, 1888, to be paid as it becomes due from the Resources of the Public Park Sinking Fund.

West Roxbury Park, 4% Loan, due Jan. 1, 1913 . .	\$233,000 00
Arnold Arboretum, 4½% Loan, due Jan. 1, 1913 . .	60,000 00
East Boston Park, 4% Loan, due Jan. 1, 1913 . .	50,000 00
West Roxbury Park, 4% Loan, due April 1, 1913 . .	300,000 00

Amount carried forward, \$643,000 00

<i>Amount brought forward,</i>		\$643,000 00
Charles River Embankment, 4% Loan, due April 1, 1913	285,000 00	
City Point Park, 4% Loan, due April 1, 1913	209,000 00	
Muddy River Improvement, 4% Loan, due April 1, 1913	119,000 00	
West Roxbury Park, 4% Loan, due Jan. 1, 1914	500,000 00	
Muddy River Improvement, 4% Loan, due April 1, 1914	75,000 00	
Charles River Embankment, 3½% Loan, due Oct. 1, 1915	16,000 00	
City Point Park, 3½% Loan, due Oct. 1, 1915	13,000 00	
Arnold Arboretum, 3½% Loan, due April 1, 1916	20,000 00	
Charles River Embankment, 3½% Loan, due Oct. 1, 1916	55,000 00	
Public Park Lands, 3½% Loan, due July 1, 1917	400,000 00	
Public Park Construction, 3½% Loan, due Jan. 1, 1937	500,000 00	
Public Park Construction, 4% Loan, due Jan. 1, 1918	450,000 00	
Public Park Construction, 4% Loan, due April 1, 1918	5,000 00	
Public Park Construction, 4% Loan, due July 1, 1918	5,000 00	
Public Park Construction, 4% Loan, due Oct. 1, 1918	40,000 00	
Total Debt		\$3,335,000 00
Less the means in the Sinking Fund, and in hands of City Treasurer, for paying the same, Dec. 31, 1888		413,959 61
Debt, less means for paying		\$2,921,040 39

SINKING FUND STATEMENT.

Resources of the Public Park Sinking Fund, Dec. 31, 1888, in hands of Sinking Fund Commissioners; being Bonds of the City of Boston and Cash, with the Dates when the Bonds become due.

West Roxbury Park, 4% Loan, due Jan. 1, 1913	\$100,000 00
Arnold Arboretum, 4% Loan, due Jan. 1, 1913	60,000 00
East Boston Park, 4% Loan, due Jan 1, 1913	50,000 00
Muddy River Improvement, 4% Loan, due April 1, 1913	19,000 00
Cochituate Water, 4% Loan, due April 1, 1917	25,000 00
Cochituate Water, 3% Loan, due April 1, 1917	25,000 00
Public Park Construction, 4% Loan, due Oct. 1, 1918	23,500 00
Total investments	\$302,500 00
Cash	102,414 90
Total resources	\$404,914 90

PARK CONSTRUCTION.

The following is an account of the operations of the Department during the past year; a more detailed statement by the Engineer will be found in the Appendix:—

Wood Island Park.—The only work undertaken was the completion of the bridge over the tracks of the Boston, Revere Beach & Lynn railroad, and grading the approaches, which has been done, and provides a safe entrance to the park lands.

Marine Park.—The iron pier has been completed for a length of 1,050 feet. Four additional spans, of 60 feet each, were contracted for in October last, and a plan, one of many that were considered, for the pier-head has been adopted.

A granite curb has been placed on the street line, and a small amount of grading done along the line of the curb.

Charles River Embankment.—The filling and grading have been completed, the areas for planting loamed and enriched with fertilizers, the walks and playgrounds laid out, the foundations for gymnastic apparatus placed, and a railing has been erected along the sea-wall. The fence surrounding the gymnasium ground has also been completed.

The Parkway.—Back Bay Fens.—Agassiz bridge and the roads bordering Charlesgate and around the lower basin of the Fens, have been completed and are open to the public. Audubon Road, on the westerly side of the upper basin, has been filled to subgrade, and the slopes and banks of the Fenside for a considerable distance in this basin have been formed, and are receiving the loam preparatory to planting. The foundations of the bridge for carrying the driveway and ride over the open Stony-brook water, which enters the Fens through the Huntington Entrance, have been partly built by the Sewer Department. The spaces prepared for trees and shrubs last year were planted.

Arnold Arboretum.—No new construction being undertaken, the only work done has been that of maintenance.

Franklin Park.—The Playstead district, with its entrances, the bordering roads, and the Overlook, has been completed and opened to the public. The shelter-house is practically finished, and a flag-staff has been erected. The valley-gate to the Country Park and a part of the park wall on the line of Glen Lane have been partly built, and the lane partially graded for half its length. The circuit drive has been subgraded to the location of the Ellicott arch, which is now being built. The drives and ride through the Wilderness have been laid out and cleared of trees, and much stone has been removed from the Ellicottdale green.

The plans of the system of parks are followed so strictly that it would be superfluous to undertake to detail the future work. There is, however, one thing necessary for the completion of the Back Bay Fens, that is, more land is required to make the westerly outlet of the Fens to Brookline Avenue conform to the width of the Muddy River Improvement. This is necessary for a continuation of the work of construction, and will doubtless be provided for by the order now before the city government authorizing a loan for the purchase of this and other lands.

The suggestions of the Board in its last annual report, that the work of planting the areas reserved for planting in that part of Commonwealth Avenue lying between West Chester Park and Beacon Street be placed in charge of this Department, was adopted by the City Council in an order to place these areas under the care of the Board. A copy of this order will be found in the Appendix. It would be well, before any planting is attempted, that edgestones should be placed around these areas, no provision for which has been made by the City Council. It is understood that an estimate of the amount required for the work will be made and submitted with the annual estimates.

ADDITIONAL LANDS FOR PARKS AND PARKWAYS.

By Chapter 392 of the Acts of the year 1888, approved May 23, the Legislature authorized the city of Boston to issue bonds to the amount of \$600,000 for the purpose of purchasing or taking such additional lands for its public parks as the Park Commissioners shall deem desirable and necessary, which act will be found in full in the Appendix. On June 11 an order to carry out the above was introduced into the Board of Aldermen, and referred to the Committee on Parks. No action seems to have been taken upon it during the remainder of the year.

The Board, therefore, recommends the adoption of an order in the following form, which has the approval of the Law Department and City Treasurer:—

Ordered, That, for the purpose of purchasing or taking such additional lands for public parks as the Park Commissioners shall deem desirable and necessary, the City Treasurer is hereby authorized to issue negotiable bonds or certificates of indebtedness to the amount of \$600,000, payable in thirty years from their date, and bearing interest at the rate of four per cent. per annum, to be denominated on

the face thereof, "The Public Park Loan," and the Park Commissioners are hereby authorized to expend said sum for said purpose.

USES TO WHICH GREEN SWARD MAY BE SUBJECTED.

The attention of the public is particularly called to the report of the Landscape Architects, in which they go over at some length the uses for particular purposes to which the Playstead, and green swards generally, may be subjected without injury to their appearance to the great mass of visitors. They also give the results of the experience in this matter of Park Commissioners of other places, and point out many limitations to such uses necessary for the good of the greater number. They give the lessons taught by the experience of those having charge of the public park at Hartford, Druid Hill Park at Baltimore, Chicago South Park, the Seaside Park at Bridgeport, the Buffalo parks, and the parks of the great cities of New York, Brooklyn, Philadelphia, and San Francisco.

The Board views with favor the conclusions of the Landscape Architects, and therefore, to give them emphasis, inserts them here in full.

REPORT OF THE LANDSCAPE ARCHITECTS ON PROVISIONS FOR THE PLAYING OF GAMES.

To the Park Commissioners: —

SIRS, — The turf of the Playstead, Franklin Park, will probably have grown sufficiently firm before the middle of next summer to bear to be a good deal walked upon without injury. It can never come to be so firm that its life may not be trampled out, leaving but bare ground in its place, if walked upon overmuch.

In every city of our Northern States which has a public park, properly so called, great dissatisfaction is constantly expressed by numbers of people with the restrictions which those in charge think it necessary to impose upon the use of its turf. Where this dissatisfaction has the most influence, either in obtaining laxity of rules or a lax enforcement of them, it invariably occurs that much turf is annually killed out; that a large expense is incurred for patchwork renewals of it, and that the value of the park as a place of refreshing scenery is greatly injured.

Practically there are two views taken of the purpose which commissioners should have in view in determining their course. In one the chief value of a park is assumed to be in the facilities it provides for physical exercise. Under this view, turf is recognized as a kind of pavement, pleasanter to walk upon than other kinds of pavement, much pleasanter to run, leap, skip, or scuffle upon. This being considered the use of turf, the less the manner of its use is restricted or regulated, the better it is assumed the park will serve its purpose. That with a certain amount of use it will become streaked, patched, and shabby, and finally disappear is true. But the same is true of a gravelled walk or a flagged walk, a street pavement or the floor of a house. To restrict the use of these things because use will gradually wear them out and make them streaked, patched, and shabby is thought to be wholly unreasonable. As pavements and floors require repairs, and, from time to time, complete renovation, so it is with turf. That the turf of a park has been worn out by the use made of it is held to be the best possible evidence that it has well filled a public want.

In the other view the chief value of a park is taken to lie in the opportunities it offers the people of a city to refresh themselves by the contemplation of scenery standing in strong relief to that which they have commonly under view, such relief being due mainly to its broad, quiet, rural character and to the predominance of natural, clean, fresh, and lively verdant features. If a city intends simply to provide commodious places of exercise for its people, it is held that much simpler arrangements for that purpose than those found on parks would be less costly and more effective. Under this view the essential value of turf lies in its effect upon the landscape of the park; to subject it to such use as will give it a streaked, patched, sickly, and shabby character is, by so much, to spoil the park for its distinctive purpose. Therefore, it is argued, the turf of a park should nowhere be subjected to such usage that, through its own vital action, it will not remain in constant fresh, lively, verdant condition.

In deciding whether the Playstead shall be open to use as a playing floor for games of all kinds, at all times, by all who may choose to play them, or in what manner its use shall be limited and regulated, the Commissioners must adopt one of these two views, and must subject themselves to the censure of those who adopt the other. This being the case, the Commissioners will do well to consider what customs in respect to the use of turf will prove to have been desirably established when the population of the city shall have come

to be much larger than at present, when the use of the park shall have been better learned than it is at present by the people, and when means of access to the park from a distance shall be much better than they now are.

That in the discussion of this question Boston might benefit by the experience of other cities, inquiries have been made personally and by letter, the more significant returns from which will presently be stated.

It may be observed in advance that provisions for playing games in parks seem generally to have been made at the outset without much effort to estimate the probable results, and that, once established, Commissioners have been slow to incur the enmity of those interested in maintaining them in order to make such changes as they have become convinced would be desirable for the interest of all concerned.

It may also be observed that the condition of turf as affected by regulations for playing upon it in any park is largely dependent on the extent of the park relatively to the population resorting to it; its distance from the centre of that population, its topographical character (more particularly its breadth of flat, meadowy surface), and the suitableness of its soil to sustain turf.

For example, the public park at Hartford is of comparatively small extent; has not much flat surface, and is not far away from the centre of population. A part of it was at an early day allowed to be used with little restriction by base-ball and foot-ball players; but the defacement of the turf which followed; the cost of renewing and maintaining it; injuries to trees and shrubbery, with occasional disorderly proceedings, and the disturbance and discomfort that resulted to the greater number of visitors, at length compelled the Commissioners to refuse the use of any part of it for games. The dissatisfaction of players was soon neutralized by the larger and more satisfactory use of the park made by a much larger body of the public. The President of the Commissioners now in charge of it writes that if provision is to be made by a city for games, it is his opinion, and that of his associates, that it is much better that it should be made on a separate piece of ground from that of a rural park.

In Druid Hill Park, Baltimore, which is not only larger relatively to the population of the city than that of Hartford, but also much more distant from the centre of population, there has always been a base-ball ground, and it is maintained under strict regulations, with little injury to the park. But two games, however, are allowed to be played upon it at a

time, and players are obliged to obtain permits for the use of ground for fixed hours in advance. It is thus generally engaged two weeks ahead, and the players are mostly young men, such as bank clerks, whose business confines them during certain hours, giving them freedom at others, so that they can for these make engagements so far in advance. The playground is kept closely under view by the police, and if disorder occurs is promptly cleared. It does not appear that the school-boys of the city get any use of it, or that their wants are elsewhere provided for. In other parts of this park there are twenty-three lawn-tennis courts; but to prevent excessive wear of the turf in them, only nineteen are allowed to be used the same day. Permits to use them must be obtained in advance, and are refused when applied for by the same players oftener than twice a week.

At the end nearest the city of the Chicago South Park, of which the area is about twice that of Druid Hill, a flat field of prairie soil is prepared for games. It has an area of 100 acres (five times that of the Playstead of Franklin Park). It is *six miles from the centre of the city*, and, naturally, thus far little restriction upon the use of it for base-ball or other games has been found necessary. But care is taken that the same space is not occupied two days in succession, and the ground used is copiously irrigated at night.

Within the Seaside Park of Bridgeport, which again is comparatively small and near the centre of population, there has from the first been a ball-ground, originally intended for the use of school-boys, but which has been taken possession of by men, almost to the exclusion of the boys. The turf is badly scarred upon it, and the best use of the park is often much disturbed by crowds collecting to watch "match-games." The Superintendent says that in the near future its use must be more strictly regulated, though he fears it will now be difficult to bring about what is desirable in this respect.

The Superintendent of the Buffalo parks writes of one of the ball-grounds under his charge, that its turf has been *obliterated* by the players. Of another area originally designed for a ball-ground, he reports that the damage done to its turf by the games, with the unruly conduct of both the players and the spectators, led the Park Commissioners some years ago to prohibit the playing of base-ball upon it. It is still used for cricket, croquet, and occasionally, by special permission, for foot-ball.

The city of New York, with a thousand acres of park area in use, and three thousand yet unimproved, provides a ball-ground only for its school-boys. For these there is an availa-

ble space of about fourteen acres in the Central Park. No fixed bases are allowed, nor any usage by which the turf may be evidently marred. Permission to occupy the ground is suspended whenever it is excessively dry or excessively wet. With all these precautions, the turf is at times considerably injured. There is a smaller meadow in the Central Park which was originally set apart for cricket, afterwards for base-ball, until it became a public offence through the destruction of its turf. It was then broken up, and a new turf having been formed, has since been allowed to be used only for archery and croquet, chiefly by school-girls and young ladies.

The city of Brooklyn provides a special field of forty acres, not within any park, in which base-ball, cricket, and lacrosse are played. In its main rural park, there is a meadow similar in character to that of the Playstead of Franklin Park, in which lawn tennis and croquet are played, base-ball and all games likely to seriously injure the turf being prohibited. Permits for the use of a court must be obtained in advance, and often all the courts are occupied.

Fairmount Park, of Philadelphia, is the largest of all the public parks in the country, being nearly six times larger than Franklin Park. Of its 2,800 acres, a space of about two acres only is appropriated to ball-playing. It has not been found possible to keep this in decent order, and the President of the Park Commission describes it as a constant eyesore. Necessarily very few benefit by it, and public opinion, though accepting ball-playing to this extent as an established custom, would be strongly opposed to the appropriation of additional land to the game. The school-boys of the city seem to have no ball-ground. Its base-ball clubs provide themselves with grounds at various points in the suburbs. Tennis and croquet are largely played in the park. The use of chalk or lime for marking out the courts is not allowed; tapes supplied by the players are substituted. The Commissioners evidently regret that the playing of base-ball should ever have been permitted in the park, but the custom being established, are satisfied, for the present, to keep it within the limits stated.

The Commissioners of Golden Gate Park, San Francisco, which is twice as large as Franklin Park, state that they have been much pressed, as their predecessors had been, to provide upon it a public ball-ground free to all; but it is their opinion that if the city is to assume such a duty it would be better to take a field for it outside of the park. A ball-ground within it would be a serious injury to the park for its more important purposes, and would add greatly to

the cost of its maintenance. The street-railways of the city have leased a body of turfless land and graded, gravelled, and otherwise fitted it for match games between clubs. A charge of a quarter of a dollar is made for admittance to it, and it is largely used, with great profit to the companies. Upon the park two playgrounds have been lately prepared for school children under twelve years of age; one to be used chiefly by girls as a field for tennis and croquet, the other by boys for base-ball and foot-ball. In both, the ground to be played upon is gravelled, it being considered out of the question to keep turf in good order, even when to be used only by children. Near these playgrounds there are, in fact, several acres of fine level turf, but the use of it for games has never been allowed. Tennis and croquet are nowhere played on turf in California. The best courts have a surface of asphaltic concrete, such as is often used for railway platforms.

A smaller part of Franklin Park has the flatness of surface required for ball-grounds than of most of the parks that have been mentioned. Its soil is thinner, more stony, and less adapted to sustain turf than that of most of them.

We think that the Commissioners should aim to prevent the turf of the Playstead from being so injured that it would be an eyesore to all using the park. We think that the use of it by school-boys on holidays for the playing of games in a school-boy way (not in imitation of the hired players of the public exhibition grounds) would not prevent its proper preservation. We think that the free strolling over it by the public under ordinary circumstances when it is not given up to the boys would not prevent its proper preservation. We think that until other ground has been provided no harm will come from the playing of tennis and croquet or the practice of archery upon it.

To keep the Playstead in good condition for these uses and also pleasant to look upon, it should be open to no other uses except upon special order of the Board upon rare public occasions.

Respectfully,

F. L. & J. C. OLMSTED,

Landscape Architects Advisory.

BOSTON, Dec. 31, 1888.

VISIT OF THE CITY COUNCIL.

The Board having completed the circuit drive and walks of the lower basin of the Back Bay Fens and of the Playstead District of Franklin Park, before opening the grounds to the public, extended invitations to the City Government, the Heads of the Departments, past Commissioners of Parks, and others to a visit of inspection. This occurred on October 2, 1888. The invitation was accepted, and a large number attended. The day proved a fine one, and there were on all hands expressions of satisfaction at the progress made and character of the work. The views, as the visitors entered the grounds from Walnut Street and from the Playstead Overlook, were agreeable surprises to all.

BOSTON HARBOR ISLANDS.

In the last annual report, the Board referred at considerable length to the project of re-foresting the harbor islands, its attention to the matter having been directed by a communication from the Boston Memorial Association, which, together with a report upon the subject by the Landscape Architect will be found in that report.

The Board repeats its recommendations therein contained, and presents a plan whereby a beginning may be made in this important work.

The city owns the Great Brewster, an island at the entrance of the harbor, just inside of Boston Light, and exposed to all the winds and storms of the coast.

This island was purchased by the city to control it for the benefit of the harbor,—as is understood by the Board,—and the United States has built a heavy sea-wall about its most exposed shores to prevent its further washing away. If trees can be made to grow here, it will be an extreme test of the feasibility of the undertaking. It is now leased for the sum of one hundred dollars a year to the Chairman of the Board of Park Commissioners, who, if this plan meets with the approval of the City Council, is willing to give up his lease of the island in order that the scheme of re-foresting the islands of the harbor may be started on a sure basis.

For the purpose of this trial, and for supplying the occupants of other islands — and also headlands — with suitable trees, an appropriation of five thousand dollars is desirable.

Preparations for procuring the trees should be commenced sometime in advance of their transplanting to the islands.

The Board, however, is not willing that, by the taking of the Great Brewster, the plan so exhaustively set forth in last year's report should be abandoned.

Respectfully submitted,

BENJAMIN DEAN,
PATRICK MAGUIRE,
JOHN F. ANDREW,

Commissioners.

BOSTON, Jan. 25, 1889.

Since the adoption of the report, the Commissioners have had placed in their hands a paper read by Frederick Law Olmsted before the New England Club, which is thought of sufficient interest to find a place in the appendix to this report.

APPENDIX.

APPENDIX.

CITY ENGINEER'S REPORT.

OFFICE OF CITY ENGINEER,

CITY HALL, BOSTON, Jan. 25, 1889.

HON. BENJAMIN DEAN, *Chairman Board of Park Commissioners*:—

SIR,—I herewith submit the following report of work done and of the matters of interest in connection with the work placed under my direction by your Board. The work being continued under the immediate charge of Assistant Engineer E. W. Howe:—

THE PARKWAY.—BACK BAY FENS.

Excavation of Waterway.—In the spring, when the ice left the basin, the work of removing the earth dams across the channel at Agassiz Bridge and filling in the old channel across the Agassiz Road was begun. This was completed early in July.

During the remainder of the season, the dredger has been employed in completing portions of the channel which had previously been partially excavated, the completion of the new channel under Agassiz Bridge making it possible to empty the southerly part of the basin, thus discovering a number of places which were not down to grade, and also showing a considerable deposit from the overflow of Stony Brook. The dredging has been carried on at a considerable disadvantage, as a large part of the material had to be unloaded from the scows by wheelbarrows, all the places where it could be dumped directly from the scows having already been filled.

Grading of Marsh.—This work has been nearly completed, there being now about 19 acres of finished surface between grades 8 and 9, less than one acre remaining to be done.

Drainage.—Drains have been built in Charlesgate East, Charlesgate West, and Agassiz Road. The drains in Charlesgate East discharge into the common sewer, and other drains discharge as described in the report for 1887.

Roadways, Walks, and Rides.—April 9, a contract was made with the B. & A. R.R. Co. for delivering gravel. Most of this was used for completing the grading of Agassiz Road and of Audubon Road from Agassiz Road to its junction with the Fenway, the balance being deposited on the southerly part of the Fenway. This work was completed August 9, and there was delivered 47,745 cubic yards of gravel, at \$0.57 per cubic yard.

On February 28, a contract was made with Albert A. and James

O. Libby for furnishing curbstone for that portion of the Parkway between Beacon Street and the Boston & Albany Railroad. There was delivered $3,407\frac{7}{12}$ linear feet of curbstone at \$1.59 per linear foot.

A contract was made with John Shields for furnishing paving-blocks, under which he delivered 60,518 blocks, at \$44.37 per M.

The roadways and walks on the Parkway north of and including Agassiz Road left incompletely last season have been graded and macadamized in the same manner as was described in the last annual report, the curbstones have been set and the gutters paved, so that this portion of the Parkway is entirely completed, excepting the planting of trees upon the borders of a portion of the drives, and the providing of some system of lighting.

In addition to the above, about 1,700 linear feet of Audubon Road southerly from Agassiz Road, has been sub-graded in readiness for setting the curbstone and macadamizing the roadway.

Agassiz Bridge.—This bridge, which was fully described in the last annual report, was completed in February with the exception of the parapet wall, which it is thought best to leave until the back-filling has settled.

Grading of Slopes, Loaming, and Planting.—This work has been continued during the season, and there is a large area ready to be planted in the spring. The slopes between Agassiz and Audubon Roads and the basin, the large island in the southerly portion of the basin, and the mounds on the marsh near by, are ready for planting, and a large amount of grading has also been done on the slope between the Fenway and the basin.

On June 13, a contract was made with the Metropolitan Construction Company, under which they have deposited on the slopes of the Fenway 8,538 cubic yards of earth at \$0.40 per cubic yard.

The Sewer Department has also deposited a large amount of earth excavated from the new channel of Stony Brook on the Fenway and adjoining slopes.

The following table, giving some of the items of work completed on the Parkway at Back Bay to date, may be of interest. A great deal of unfinished work which has been done on other portions of the Parkway, much of which is very near completion, is not contained in the table:—

		Percentage of whole amount to be done.
Channel excavated	.	82
Shore completed	.	90
Marsh	"	95
Driveway	"	47
Walks	"	30
Ride	"	23
Curbing	"	50
Gutters	"	45
Area covered with loam completed		51
Area planted	"	37

In addition to the above, there have been built 4,663 linear feet of drains, 6 manholes, and 55 catch-basins.

ARNOLD ARBORETUM.

The work of construction done during the past year has been confined to the planting of the slopes of the driveway to the top of Bussey Hill, where they are included within the city's reservation.

Some slight repairs have also been made on the drives and walks.

FRANKLIN PARK.

Drives and Walks. — The Glen, Pierpont, and Playstead Roads, together with a section of the Greeting to connect the two latter, and the entrances from Walnut Avenue, have been completed.

The walks adjoining these roads have also been completed with the exception of a short length in the rear of the Shelter building. Glen Lane for a length of about 2,400 feet and the circuit drive in the Country Park for a length of about 3,000 feet have been graded.

On March 24 a contract was made with S. & R. J. Lombard for furnishing paving-blocks, and 111,106 blocks were delivered at \$48 per M.

The Overlook. — The wall has been entirely completed and the face of it planted. Seats have been constructed of stone and covered with oak slats. The walk and the steps leading from the driveway have been finished, and four rustic drinking-fountains have been built of the stone found upon the park.

The Shelter. — This building is nearly completed, the excavation, the foundations, the masonry side-walls, the chimneys above the roof, and the outside steps having been constructed by the park force, while the carpenter-work has been done by contract, under the direction of the City Architect. All the exposed masonry is of field stone, laid so as to show weather-worn and mossy-faces. The remainder of the building is covered with rived cypress shingles.

Playstead Green. — The grass-seed sown in the fall of 1887 has produced a fine turf, the care of which has required considerable labor, the grass having been kept cut short by means of lawn-mowers.

A flagstaff, consisting of a single stick 105 feet in length, has been erected. It stands upon a ledge, in about the centre of the green, and rests upon a cast-iron foot bolted to the ledge, the staff being supported laterally by three wire-rope guys attached to anchor-bolts set in the rock.

Gateways. — At the entrance to the Country Park, from the Playstead district, it is designed to have gates for closing this part of the park at night. Plans for these gateways were prepared by Messrs. Walker & Best, architects. There will be four wrought-iron gates, two for the driveway and one for each of the footpath entrances, which will run upon tracks laid across the driveway and walks. When the Country Park is open, these gates will be run into chambers of rustic masonry, which have been built for that purpose. Adjoining the gateway, about 230 feet of retaining-wall has been built on the line of Glen Lane.

Ellicott Arch. — The circuit drive will cross a footpath leading from the entrance at the junction of Williams Street with Forest Hills Street upon an arch of masonry. Work upon this arch was begun in midsummer, but was discontinued when the force was needed on other work.

The work has recently been resumed, and the arch will be completed early next season.

The following table gives some of the items of the work which has been completed to date. As is the case in the statement given in reference to The Parkway, a large amount of work has been done which cannot be stated in figures; such as clearing of grounds of trees and rocks, grading of grounds which have not as yet been finished, etc. :—

Driveways . . . . .	. . . . .	27,225 sq. yds.
Walks . . . . .	. . . . .	20,000 "
Gutters paved . . . . .	. . . . .	4,923 "
6-in. water-pipe laid . . . . .	. . . . .	3,000 lin. ft.
Hydrants . . . . .	. . . . .	3
Drinking-fountains . . . . .	. . . . .	4
2-ft. brick drain . . . . .	. . . . .	519 lin. ft.
18-in. pipe " . . . . .	. . . . .	1,233 "
15-in. " " . . . . .	. . . . .	983 "
12-in. " " . . . . .	. . . . .	805 "
10-in. " " . . . . .	. . . . .	989 "
8-in. " " . . . . .	. . . . .	3,087 "
4-in. agricultural tile drain . . . . .	. . . . .	900 "
3-in. " " " . . . . .	. . . . .	1,200 "
2-in. " " " . . . . .	. . . . .	9,500 "
Total drains . . . . .	. . . . .	— 19,140 lin. ft.
Manholes . . . . .	. . . . .	13
Catch-basins and inlets . . . . .	. . . . .	50

The area of ground graded and planted or seeded, and not included in above table, is 34 acres.

MARINE PARK.

Iron Pier. — The building of the iron pier was suspended, on account of unfavorable weather, from January 15 to February 20, from which latter date the work was continued till November 7, when the work called for under the contract of July 11, 1887, was completed.

The connection between the temporary wooden pier and the iron pier was completed October 13, and the iron railings and lamp-posts were finished and in place December 8.

The completed portion of the iron pier was opened to the public on December 2.

The total length of the seventeen spans of pier now completed is 1,049.75 feet, and the four additional spans contracted for October 20 will increase the length to 1,296.75 feet.

Curbstone. — On April 18, a contract was made with the Lanesville Granite Company for furnishing an ornamental curb to be set

on the line between the park and Q Street. This contract was completed October 17, and there were furnished 1,390 $\frac{1}{3}$ lin. ft. of curbstone at \$2.75 per foot. The stones have been set and a small amount of grading done back of them.

In August, a new and larger service-pipe was laid to connect the refectory building with the main water-pipe, the old pipe not having sufficient capacity to supply the increased demand for water due to the putting in of additional fixtures.

WOOD ISLAND PARK.

The only work done upon this park during the year has been the construction of the iron bridge over the Boston, Revere Beach, & Lynn Railroad. This was completed, with the exception of the railing, on September 25, and the railing was completed in November. The approaches to the bridge have been graded.

CHARLES RIVER EMBANKMENT.

In February, the old buildings adjoining the West Boston Bridge were removed, and in April the Paving Department completed the removal of their buildings. The work of grading the park grounds has been completed, the areas for planting have been covered with loam and fertilized, and the drainage has been completed. An iron railing has been erected on the Embankment wall with lamp-posts about 50 feet apart, and gas-pipes connecting with the mains of the Boston Gas Light Company have been laid to these lamp-posts. An iron fence has been erected around the gymnastic grounds at the northerly end of the Embankment, and these grounds have been prepared for their intended use with the exception of the erection of some apparatus.

The filling of the Embankment has been extended under the West Boston Bridge by a sloping bank protected by rip-rap. This was done to prevent the thrust of the filling from moving the bridge. The gravel used was dredged from Charles River. The work was done by John T. Scully, at a cost of \$2,598.77, and was completed in October.

Gravel walks have been made wherever called for by the plans. It is not thought best to construct expensive walks at present, as the ground has been but recently filled and is liable to considerable settlement.

The following table gives a statement of the work completed:—

Area of ground covered with loam in readiness for planting	262,000	sq. ft.
Area of walks completed	109,000	sq. ft.
Area of gymnastic ground	65,000	sq. ft.
Drains laid	1,220	lin. ft.
Manholes built	10	
Catch-basins	17	
Iron railing on sea wall	2,250	lin. ft.
Lamp-posts " " "	52	
Iron fence around gymnastic ground	1,184	lin. ft.

MUDDY RIVER AND STONY BROOK COVERED CHANNELS.

Examinations have been made of these channels from time to time, and portions of each where the foundation is in moving mud will have to be rebuilt or strengthened by inside bracing. A portion of the Muddy River conduit is temporarily strengthened, as described in last year's report.

Respectfully submitted,

WILLIAM JACKSON,

City Engineer.

STATUTES OF THE COMMONWEALTH AND ORDERS
OF THE CITY OF BOSTON CONCERNING PUBLIC
PARKS AND RELATED MATTERS.

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 376.]

In the Year One Thousand Eight Hundred and Eighty-eight.

AN ACT TO AUTHORIZE THE CITY OF BOSTON TO REFUND A
PORTION OF THE MONEY PAID AS BETTERMENTS
FOR THE MARINE PARK IN SAID CITY.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The city of Boston may, by concurrent vote of the city council, at any time within two years from the passage of this act, refund any portion, not exceeding ninety per centum, of the sums assessed for betterments on account of the marine park in said city and paid, in whole or in part, into the treasury of said city prior to the fourth day of June in the year one thousand eight hundred and eighty-seven; and any sums so refunded shall be paid by the city treasurer to the persons to whom said betterments were assessed or their legal representatives.

SECT. 2. This act shall take effect upon its passage.

(Approved May 18, 1888.)

COMMONWEALTH OF MASSACHUSETTS.

[CHAP. 392.]

In the Year One Thousand Eight Hundred and Eighty-eight.

AN ACT TO ENABLE THE CITY OF BOSTON, FOR THE PURPOSE
OF OBTAINING LANDS FOR ITS PUBLIC PARKS, TO
INCUR INDEBTEDNESS OUTSIDE OF THE
LIMIT FIXED BY LAW.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. The city of Boston for the purpose of purchasing or taking such additional lands for its public parks, as the park commissioners of said city shall deem desirable and necessary, and paying therefor, may incur indebtedness and may from time

to time issue bonds, notes or scrip therefor to an amount not exceeding six hundred thousand dollars, outside of the limit of indebtedness fixed by law for said city, payable in periods not exceeding fifty years from the date of issue, and bearing interest at rates not exceeding four per cent. per annum, but the provisions of chapter twenty-nine of the Public Statutes, and of chapter one hundred and twenty-nine of the acts of the year eighteen hundred and eighty-four shall in all other respects apply to the issue of said bonds, notes, and scrip, and to the establishment of a sinking-fund for the payment thereof at maturity.

SECTION 2. This act shall take effect upon its passage.

(Approved, May 23, 1888.)

CITY OF BOSTON,
IN BOARD OF ALDERMEN, March 5, 1888.

Ordered. That the areas reserved for the planting of trees, shrubs, grass, etc., in that part of Commonwealth Avenue lying between West Chester Park and Beacon Street, be placed in charge of the Board of Park Commissioners.

Passed. Sent down for concurrence. In Common Council, March 15, concurred. Approved by the Mayor, March 20, 1888.

REMARKS ABOUT A DIFFICULTY PECULIAR TO THE
PARK DEPARTMENT OF CITY GOVERNMENTS,
ADDRESSED, UPON INVITATION, TO THE NEW
ENGLAND CLUB, 26TH JANUARY, 1889.

BY FREDERICK LAW OLMFSTED.

NOTE.—The Park Commissioners had been invited to address the Club, and, at the request of its president, the following paper was prepared, with the object of presenting the affairs of the Department from another point of view from theirs. It is printed because the condensed reports of it which have been published, although correct as far as they go, do not present the leading purpose of the writer, which was to further the growth of a sound public opinion.

Having had better opportunities than the Commissioners who have addressed you for studying the history of the Park Departments of other cities, I propose to say how the affairs of the Boston Park Department look from a comparative point of view.

In all cities the business of a Park Department has to be carried on under a difficulty peculiar to itself. That I may suggest its nature I will first remind you that Park Departments are a new feature of city governments, and that before any of them were formed, nearly every city possessed public grounds, and an organization for taking care of them. In New York and many other places they were called parks, and the committees of the city council supervising them were called park committees. When the modern Park Departments were formed, they did not, as a rule, supersede these older arrangements. For example, here in Bos-

ton, before there was any Park Department you had the Common and the Public Garden, and a number of small grounds, some of which were designated parks; you had Commonwealth and West Chester Park avenues, with their strips of greensward and trees and beds. Moreover, you had Chestnut Hill, with its fine shade trees and its well-made pleasure roads and walks, passing between and around two broad artificial sheets of water, the whole more than 200 acres in extent. All these grounds remain and the business of taking care of them continues to be carried on as before. It may be questioned if any business of the city government is carried on more skilfully or more satisfactorily to the people.

Why, then, should another department, under the name of the Park Department, have been added to the already somewhat cumbersome machinery of the city government?

Carpers cannot say that it was to provide fat places for men to whom successful politicians had become indebted. The Park Commissioners get no salaries.

What then? There is but one way of avoiding the conclusion that all our cities have been doing a senseless thing in instituting these Park Departments. It is to assume that they are designed to supply a want not had in view under the old arrangements.

But, adopting this assumption, the question occurs, where is the distinctive duty in this respect of the Park Department defined? The Act establishing the Boston department states that its purpose shall be "to locate, lay out, improve, govern, and regulate one or more public parks." But this does not define a purpose distinct from that before provided for, nor is the distinctive business of the department anywhere, by any statute or ordinance, title or preamble, so defined that it can be clearly separated from the purpose of such institutions as the Public Garden and the Common, "Chester Park," "Union Park," and "Washington Park."

It is much the same elsewhere. In one of our great cities a site within a park was, some time ago, appropriated to a certain public purpose, and park funds voted to further advance that purpose. Commenting upon this action it was observed by a distinguished citizen, a lawyer and a law-maker, entirely in sympathy with the purpose, that if the action of the Commissioners in the matter did not go beyond their legal powers, then it must lie within their legal powers to set buildings, designed to promote any object which it appeared desirable to them should be furthered, at any point within the park. It would be competent for them to construct roads leading to these buildings. In fact they might occupy the entire ground with streets and buildings.

It is not necessary to my present purpose that I should undertake what the law-givers and courts have so far failed to undertake, — that is to say, to define the distinctive purpose of a Park Department; my aim is to show you where the difficulty lies, not to remove it.

The difficulty lies in the fact that the purpose to be served by a Park Department, not having been at all precisely defined, or by any form of long and well-known usage established, Park Commissioners cannot well be held — cannot well hold themselves — to a strict account for serving that purpose rather than serving numer-

ous other purposes, such as even good citizens may think it right to urge upon them.

If a Sewer Department in any of our cities should set about building much-needed school-houses, or a Fire Department aim to supply the want of a Public Library, the work would not proceed far without a question being raised as to the authority for these operations. But when land has been taken, and money appropriated for a park, there is no clear popular working understanding, or active public opinion, as to the limits of purpose within which it is to be used. None, certainly, making an exact distinction between this purpose and that of the committees of the city council supervising what are classed as "the small parks."

If the business of a Park Department is tolerably well directed, there comes, in time, a result, by familiarity with which public opinion becomes gradually educated to the point of rejoicing in work that really serves the specific purpose of the department, and of condemning its use, in any form, of public money or public property for purposes not peculiarly under its charge. In New York, for instance, after thirty years, it seems now to be approaching that point.

But, in the earlier stages of their works, the difficulty of strictly pursuing the distinctive objects for which Park Departments have been wanted, is apt to appear in many forms. I will refer particularly to two only :—

First, the results of any proper work of a Park Department are not apt to be fully reached for a long time after the work has been mainly done. Often the early results are decidedly unpleasing, as they have been, and in large parts, after many years, still are, in the work of your department, of the Back Bay Fens. The best intended results may not ripen during the lifetime of those to be chiefly credited with them. In most cases they never invite admiration as achievements. The best results of the best, most difficult, and most costly operations are likely to be accepted by the public as results of nature's work, almost exclusively. The aim of the department should be nearly everywhere, not to exhibit, but to conceal, the art it has used.

Under these circumstances, because of the vague understanding that is generally had of the purposes of the department, the value of the work it is doing is often, even generally, assumed to be found in results that are but provisional, temporary, and transitory. Even when this is not the case the public attitude toward it is apt to be an attitude of impatience, and it requires a more than usually stern sense of duty, and more than ordinary resolution and determination, both in the Commissioners and in those whom they employ in the immediate direction of operations, not to make large sacrifices to assuage this impatience.

Now, if I am asked to tell you from my comparative point of view how the business of the Park Department of Boston has fared with reference to this branch of the difficulty, I am glad that I can say that it has fared better than that of any other Park Department in the United States. I am moved to say so, more particularly in view of the patience of the public with respect to a costly work of an exceptionally tedious and unprom-

ising character. I mean that of the Fens. In no other work of which I have knowledge has the purpose of a Park Department been so liable to be misunderstood, yet in hardly any other has the original controlling purpose been pursued so steadily, or with as little waste because of a desire to realize superficial and temporarily pleasing and immediately popular results.

Second, the worst thing that can happen to the business of a Park Department is that the lasting interest of the public in this particular division of its business shall be sacrificed, in order to further what may be assumed to be more important public objects. Objects, for example, that may be assumed to be of statesmanship; with reference to which parties are formed; with reference to which money must be raised, or the equivalent of money in various indirect and easily obfuscitated forms of "patronage." You will see how the vague character of the charge given to the Park Department leaves an unusually wide door open for sacrifices of its proper purpose in this respect. You will see how such sacrifices can be made more easily in a Park Department than any other, for the reason that the motives of it can thus be better kept out of public view; can, for instance, be disguised under cover of an intention to remedy some assumed error of judgment or dishonest purpose on the part of predecessors of a different political camp. You will see that, there being occasion for such an operation, the public may be more easily misled, or, at least, brought to confusion of mind, in respect to the motives of it, than it can be in regard to the motives of any other department of city business. It may be more easily brought to applaud it because it is always easy in carrying out such an operation to gratify the public's constant impatience to have an early display of pleasing, even if merititious, results.

How is your department getting on in respect to this branch of the difficulty?

It is a good time to answer this question, because three years ago a political revolution occurred in the Park Commission. Having been a republican it became a unanimously democratic board.

The answer is, that neither under the former republican nor the present democratic administration has a man been dismissed, or a man been enlisted in any class of employment, with any motive (apparent to me), of serving a party, of rewarding party services, or of punishing failure of party services. I do not believe that a single purchase has been made, or a single contract manipulated in any manner, with any such motives.

And from my comparative point of view I may say that I do not think that there is another Park Department in the country, that at a corresponding period of its work has more successfully escaped the class of dangers that I have been trying to explain.

I do not think that with respect to any other a custom of conducting the work independently both of polities and of motives of temporary expediency has been so nearly established. I do not think that at so early a stage any other park work has come so nearly to be recognized and treated as a work of art.

Upon this conclusion I heartily congratulate your club and all good people of Boston.

